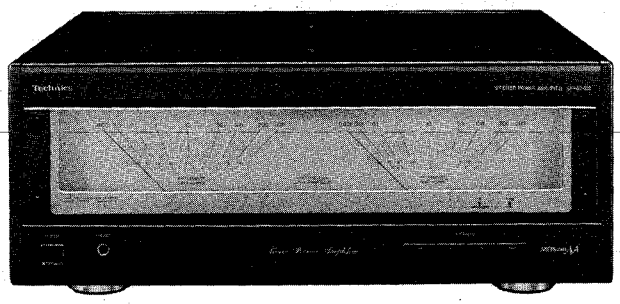
ORDER NO. AD9307208C8

Service Manual

Stereo Power Amplifier

Amplifier

SE-A2000



Colour

(K)... Black Type

Area

Suffix for Model No.	Area	Colour
(EG)	Europe.	(K)
(EB)	Great Britain.	
(G)	Asia, Latin America, Middle Near East and Africa.	

SPECIFICATIONS (DIN 45 500)

20 Hz–20 kHz continuous power output	
both channels driven	2×100 W (8 Ω)
	2×140 W (4 Ω)
1 kHz continuous power output	
both channels driven (THD: 1%)	2×110 W (8 Ω)
	2×160 W (4 Ω)
63 Hz–12.5 kHz continuous power output	
both channels driven (THD: 0.7%)	2×105 W (8 Ω)
	2×145 W (4 Ω)
Total harmonic distortion	
rated power at 20 Hz–20 kHz	0.005% (8 Ω)
	0.009% (4 Ω)
half power at 20 Hz–20 kHz	0.003% (8 Ω)
Intermodulation distortion (50 Hz: 7 kHz = 4:1, SMPTE)	
rated power	0.005% (8 Ω)
Power bandwidth (both channel driven)	
–3 dB THD 0.05%	5 Hz–80 kHz (8 Ω)
Residual hum and noise	0.15 mV
Damping factor	100 (8 Ω)
	50 (4 Ω)
Headphones output level/impedance	680 mV/330 Ω
Load impedance	
A or B	4 Ω–16 Ω
A and B	8 Ω–16 Ω
Input sensitivity/impedance	1.0 V/33 kΩ
S/N (rated power, 4 Ω)	107 dB (115 dB, IHF '66)
Frequency response	0.8 Hz–150 kHz (+0, –3 dB)
	+0 dB, –0.2 dB (20 Hz–20 kHz)

■ GENERAL

Power consumption	380 W
Power supply	
For (EG) area.	AC 50 Hz/60 Hz, 230 V
For (EB) area.	AC 50 Hz/60 Hz, 230 V–240 V
For (G) area.	AC 50 Hz/60 Hz, 110 V–127 V/220 V–240 V
Dimensions (W × H × D)	448×186×431 mm
Weight	22 kg

Notes:

1. Design and specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. **For areas except (EG)**
   The specification values given have been measured while using a 240 V power supply.

Technics

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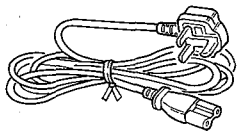
■ ACCESSORIES

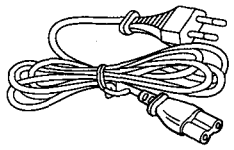
• AC power supply cord 1

[FOR (EB) area.]



(VJA0733)

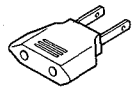
[FOR (EG, G) areas.]



(RJA0019-2K)

• Power plug adaptor 1

[FOR (G) area.]



(SJP5213-2)

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:
- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ BEFORE REPAIR AND ADJUSTMENT

Disconnect AC power, Discharge both Power Supply Capacitors C701~C704 through a 10Ω, 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdrive blade, for instance), as this may distroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230V/240V/110−127V/220−240V.

Power supply voltage	AC 230V		AC 240V		AC 120V (AC 110−127V)		AC 240V (AC 220−240V)	
Consumed current 50/60Hz	50Hz	150~450mA	50Hz	140~430mA	50Hz	260~880mA	50Hz	140~430mA
	60Hz	120~360mA	60Hz	112~344mA	60Hz	208~704mA	60Hz	112~344mA

■ CAUTION FOR AC MAINS LEAD

[For (EB) area.]

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ⓚ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

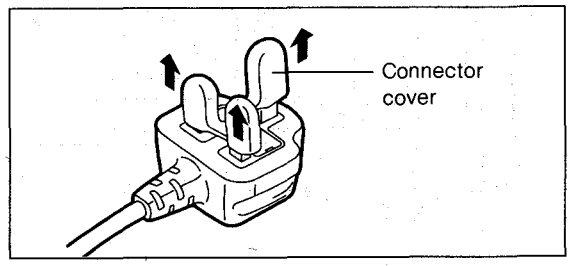
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚ .

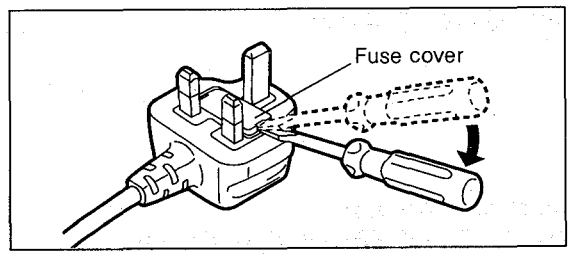
Before use

Remove the connector cover as follows.

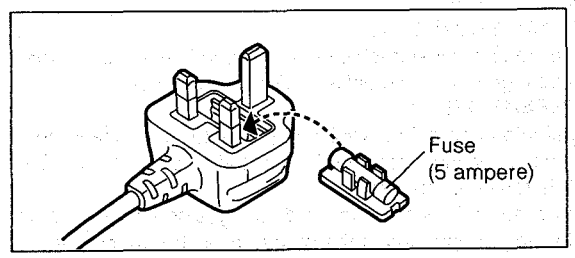


How to replace the fuse

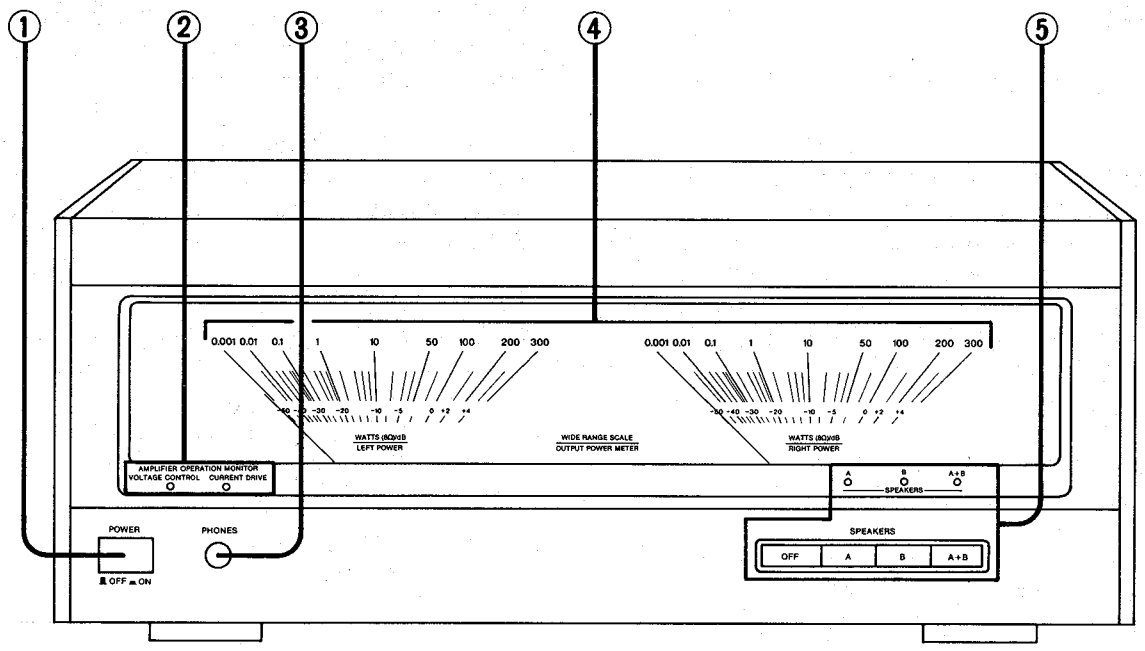
1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.



■ FRONT PANEL CONTROLS AND FUNCTIONS



① Power switch (POWER)

② Operation indicators (AMPLIFIER OPERATION MONITOR)

These indicators illuminate to indicate the operating condition of this unit.

VOLTAGE CONTROL:

Illuminates up when the power is switched on. Indicates that the voltage control amplifier is ready to operate.

CURRENT DRIVE:

Illuminates approximately 3 seconds after the voltage control amplifier indicator illuminates. Indicates that the main unit is ready to operate.

If an abnormal condition in the circuitry is detected, such as DC voltage appearing in the output, or a short-circuit of the positive (+) and negative (−) wires from the speaker terminals, the protection circuit functions and this indicator will not illuminate.

③ Headphones jack (PHONES)

④ Power meters

Indicate the output (watts) of this unit.

When speakers having an impedance of 8 Ω are connected, the output level will be as indicated. However, if the speaker impedance is 16 Ω, the output level will be one-half the indicated value, and if the impedance is 4 Ω, the output level will be double the indicated value.

$$\text{Actual output} = \text{meter indication} \times \frac{8\ (\Omega)}{\text{impedance of the speakers}\ (\Omega)}$$

⑤ Speaker selectors/indicators (SPEAKERS)

These selectors are used to select the speakers (A and/or B).

OFF: No sound will be heard from the speakers.

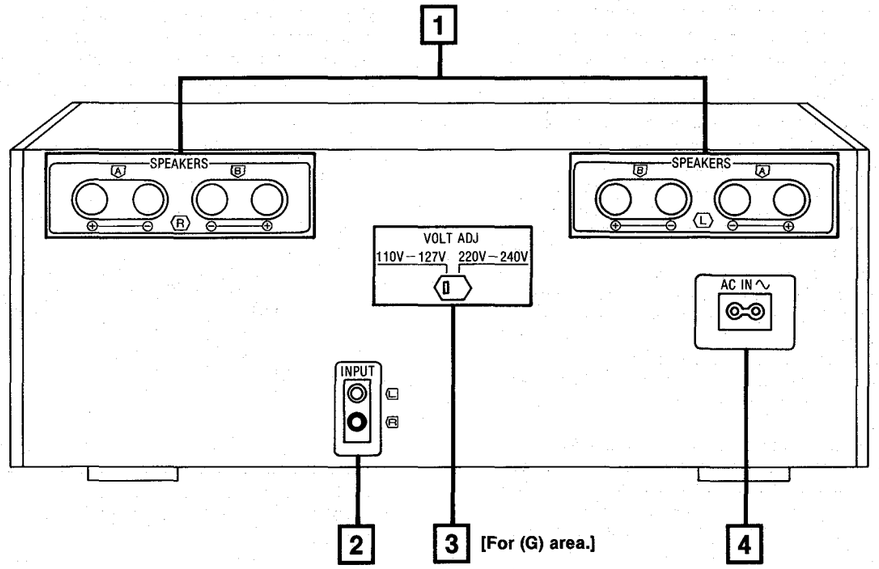
A: Sound can be heard from the speakers connected to the "A" terminals.

B: Sound can be heard from the speakers connected to the "B" terminals.

A + B: Sound can be heard simultaneously from the speakers connected to the "A" terminals and the "B" terminals.

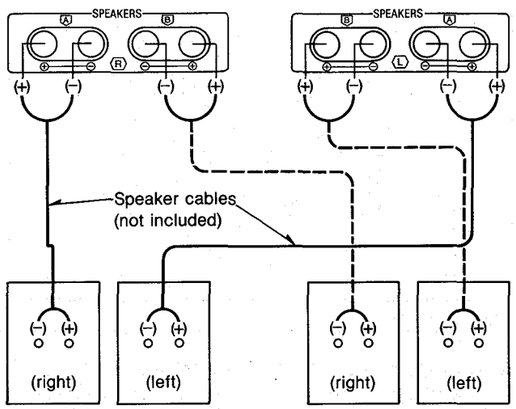
■ CONNECTIONS

Before making connections, be sure that the power to this unit and all other equipment is first turned off.



1 To connect speakers

One pair of speakers can be connected to the "A" terminals of this unit and one pair to the "B" terminals.



Main (A) speakers (not included)

Second (B) speakers (not included)

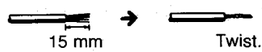
Note:
Be sure to only connect positive (+) wires to positive (+) terminals, and negative (–) wires to negative (–) terminals.

■ Speaker impedance

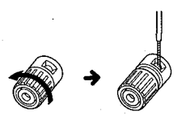
- When only the "A" or only the "B" terminals are used: 4–16 ohms
- When both the "A" and the "B" terminals are used simultaneously: 8–16 ohms

■ Connection of speaker wires

1. Twist the center conductor.

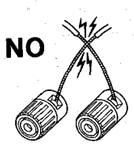


2. Turn the knob to the left and insert the wire.



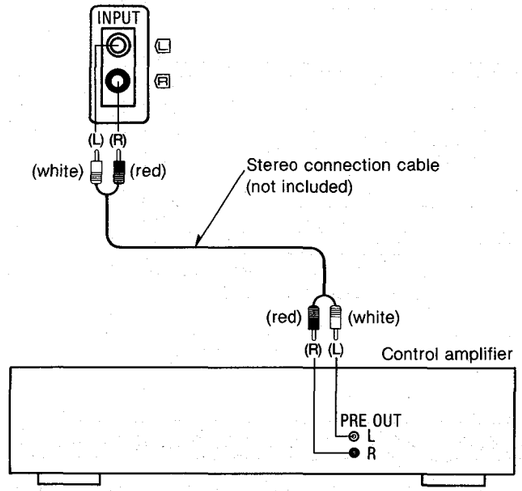
3. Tighten the knob by turning it to the right and pull the wire to assure a proper connection.

To prevent damage to the circuitry, never short-circuit positive (+) and negative (–) speaker wires.



2 To connect to the control amplifier

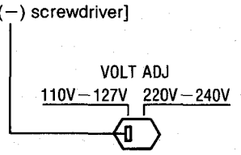
Use a stereo connection cable (not included) to connect to the output terminals of the control amplifier.



3 To set the power voltage

[For (G) area.]

Set the voltage selector to "110 V–127 V" or "220 V–240 V" according to the area in which the unit will be used.
[Use a minus (–) screwdriver]



Note:
Note that this unit will be seriously damaged if this setting is not made correctly.

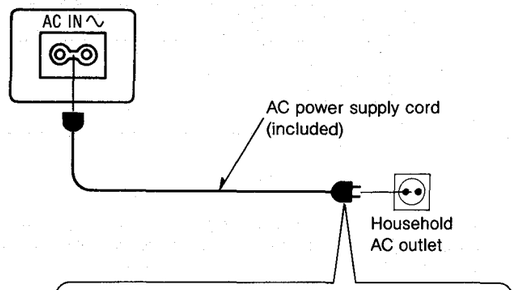
4 To connect the AC power supply cord

[For (EB) area.]

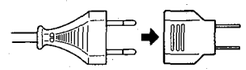
BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 3 BEFORE MAKING THE FOLLOWING CONNECTION.

Connect the AC power supply cord (included) after all other cables and cords are connected.

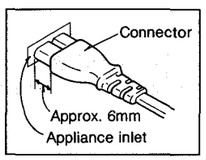
Note:
The configuration of the AC power supply cord differs according to area.



[For (G) area.]
If the power plug will not fit your socket, use the power plug adaptor (included).

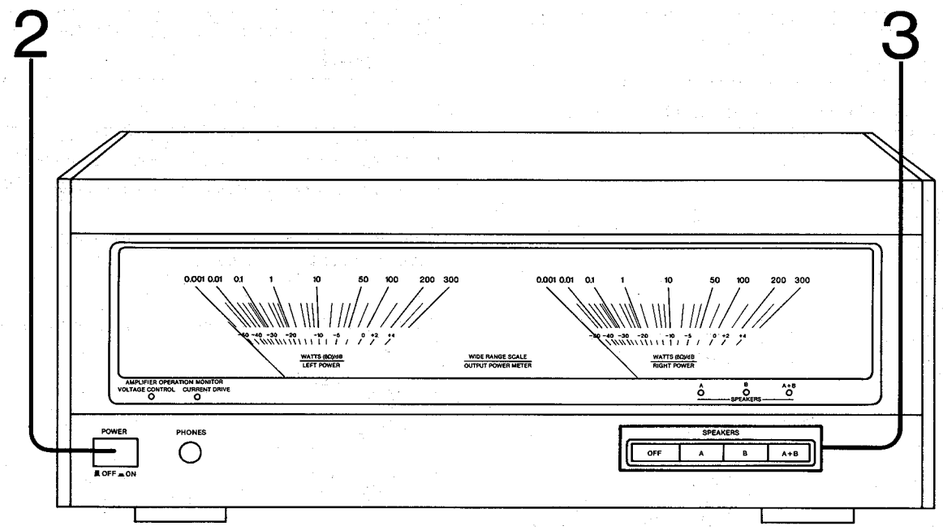


Insertion of Connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.



Caution:
Do not place books, etc., on top of this unit so that the heat radiation vents remain unblocked.

■ OPERATION



In order to protect the speakers, before performing the following procedure, set the volume on the control amplifier to the minimum position.

1 Switch on the power of the control amplifier.

2 Switch ON the power of this unit.
(The operation indicators will illuminate.)

3 Select the speakers to be used.
(The corresponding speaker indicator will illuminate.)

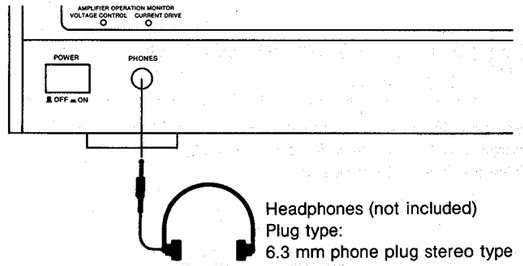
4 Operate the tape deck, CD player, or other equipment and adjust the volume on the control amplifier.

NOTE:
Because this unit has a very high output level, if the permissible input of the speaker is only low, the speakers could became damaged. Therefore, watch the power meters while adjusting the volume on the control amplifier and do not exceed the permissible input of the speakers being used.

After listening is finished:
First switch off the power of this unit, and then switch off the power of the control amplifier.

When listening through headphones

Connect the headphones to the headphones jack.
Always be sure to turn down the volume on the control amplifier before connecting the headphones.



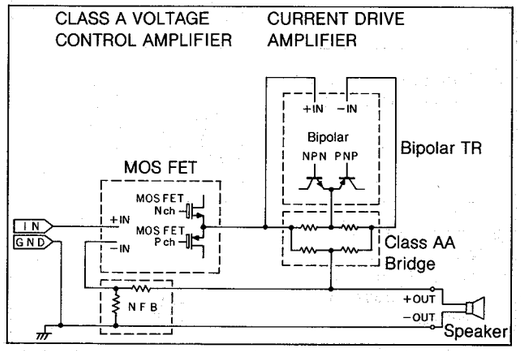
Headphones (not included)
Plug type:
6.3 mm phone plug stereo type

If the sound from the speakers is not wanted, set the speaker selector to the "OFF" position.
Note:
Avoid listening for prolonged periods of time to prevent hearing damage.

■ DESCRIPTION OF TECHNICAL FEATURES

Newly developed "MOS class AA" circuit

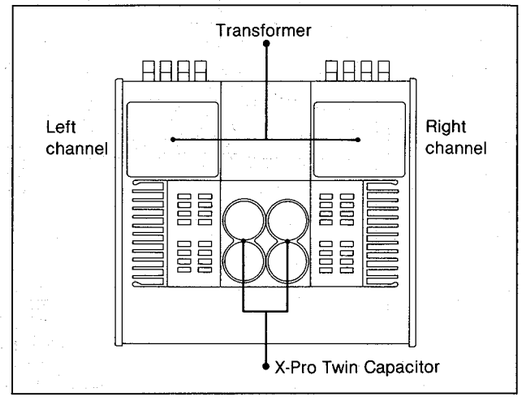
Technics developed the Class AA circuit in 1985, and since that time it has been used in many amplifiers. With the conventional power amplifiers, a single amplifier was used to perform two functions: "amplify the voltage" and "drive the current to the speakers". The Class AA circuit is a totally new and unique concept which has succeeded in combining two separate amplifiers, each of which performs one specific function.
Great progress has recently been made in semiconductor mass production technology, and the MOS FET, said to be the ideal semiconductor amplifier component, has been improved for use in audio equipment. However, as a component for the output stage, the MOS FET still has its own strong points and weak points when compared with the conventional bipolar transistor. Thus, by extending and expanding the features of the Class AA circuit, which created a whole new concept for the relationship between an amplifier's voltage amplification and current amplification, Technics has now developed the new MOS Class AA circuit, which combines the strong points of both the bipolar transistor and the MOS FET.
Considering the special features of the MOS Class AA circuit from the circuitry aspect, it is comprised of an A class voltage control amplifier which performs overall control of the entire amplifier, and a B class amplifier which generates the current to drive the speakers, thus combining high-quality A class sound with the capability to drive any type of speaker. Furthermore, in order to make the most of the features of this circuitry composition, a MOS FET which has excellent input and output linearity is used for the voltage control amplifier, and a bipolar transistor which has outstanding drive capability is used for the current drive amplifier.
As a result, the sound data from the input source is faithfully reproduced without the addition of any unwanted noise.



MOS Class AA circuit

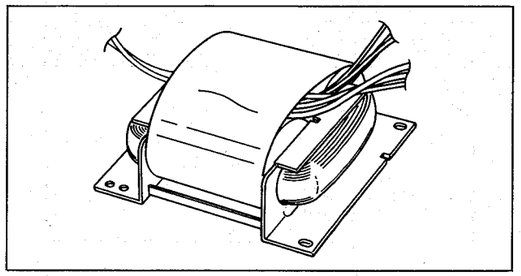
Twin-monaural composition with high-performance power supply units

This circuit features a twin-monaural composition in which the left channel and the right channel are independent of each other. As a result, noise generated by mutual interference between the two channels and the cross talk phenomenon have been drastically reduced.
The power supply section for each channel is equipped with a high-performance R-shaped core transformer having extremely low leakage flux. In addition, X-Pro twin capacitors are used for the electrolytic capacitors. In this composition, for each capacitor, there are two electrolytic capacitors, one for the (+) side and one for the (−) side, packed together with shock-absorbing material into a resin case with a copper cap, thus reducing both mechanical vibration and electromagnetic radiation.
Using this twin-monaural composition with its high-performance power supply units, it is possible to reproduce powerful super-bass sounds and achieve excellent channel separation.



R-shaped core transformer with low leakage flux

Most transformers use an EI type core or a toroidal core. However, in either case the core's cross-section is square-shaped, so the magnetic flux induced by the coil is not uniform, but rather lopsided at certain parts. In contrast, this power amplifier is equipped with a transformer which has a core with an R-shaped cross-section, thus reducing leakage flux and preventing the entrance of unwanted noise.



Other features

■ High-precision large-sized power meters
This model is equipped with the same large-sized power meters which have become a tradition on Technics power amplifiers. Furthermore, it is also equipped with operation indicators that confirm when the voltage control amplifier and the current drive amplifier are ready to operate and with speaker indicators.

■ Electronic speaker selectors
Electronic switches are used for the speaker selectors. Gold-clad contacts are used for the selector relays, thus providing light-touch operation and high reliability.

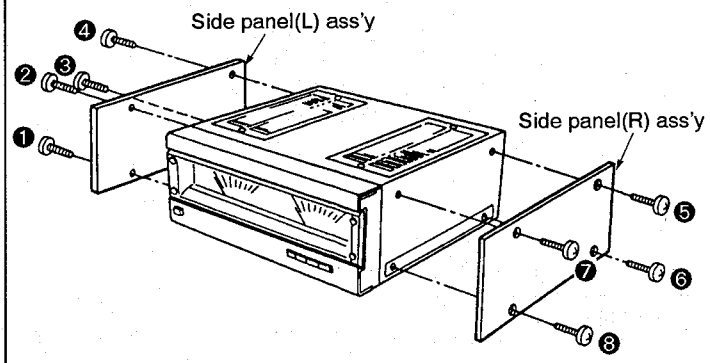
■ High-rigidity chassis
In order to provide solid support for the high-performance circuitry components, the cabinet features a completely vibration-proof design made possible by a high-rigidity chassis.

■ DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref.No. 1	Removal of the side panel(L) ass'y and side panel(R) ass'y

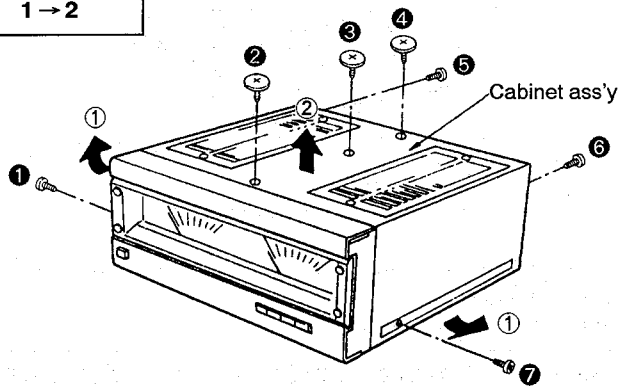
Procedure 1



• Remove the 8 screws(❶~❽).

Ref.No. 2	Removal of the cabinet ass'y

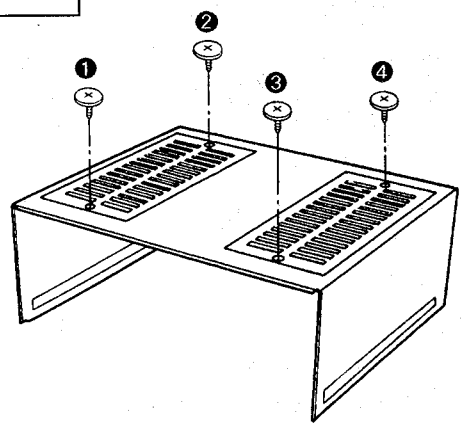
Procedure 1→2



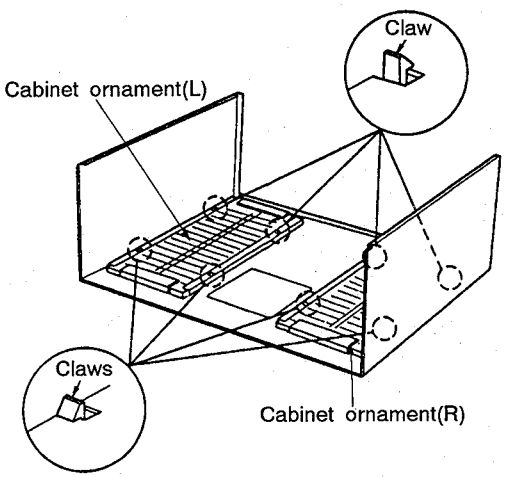
1. Remove the 7 screws(❶~❼).
2. Stretch the cabinet ass'y in the direction of arrow①, and then remove the cabinet ass'y in the direction of arrow②.

Ref.No. 3	Removal of the cabinet ornament(L) and cabinet ornament(R)

Procedure 1→2→3



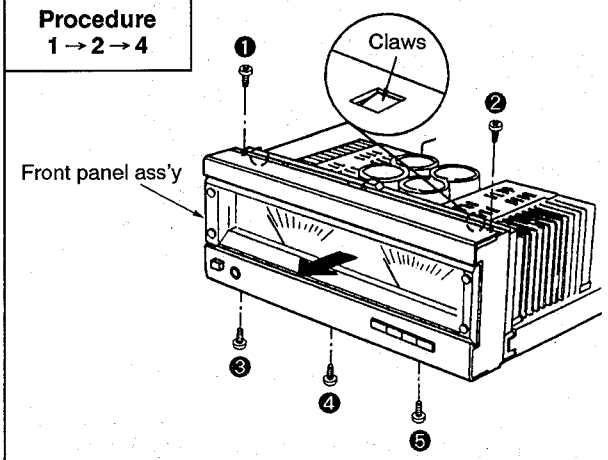
1. Remove the 4 screws(❶~❹).



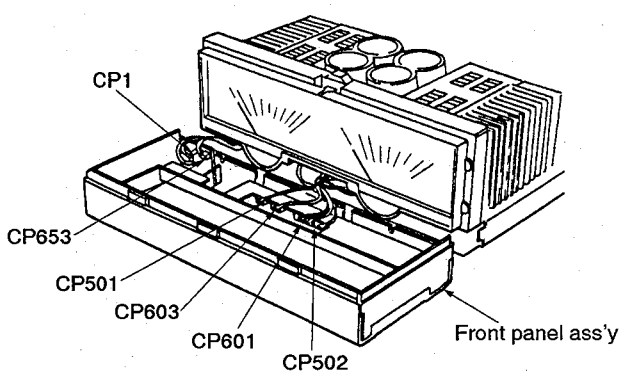
2. Release the 8 claws.

Ref.No. 4	Removal of front panel ass'y

Procedure 1→2→4

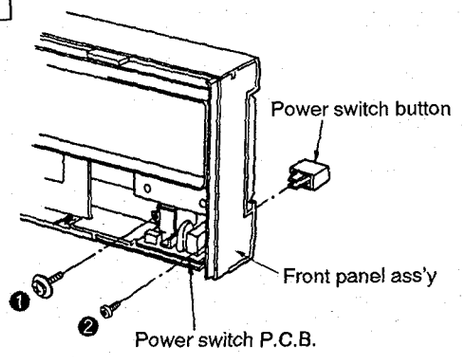


1. Remove the 5 screws(❶~❺).
2. Release the 2 claws and then remove the front panel ass'y in the direction of arrow.



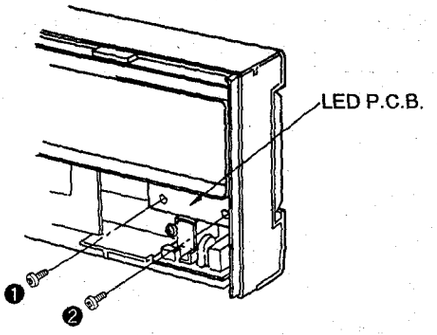
3. Remove the 6 connectors(CP1, CP501, CP502, CP601, CP603, CP653).

Ref.No. 5	Removal of the power switch P.C.B.
Procedure 1→2→4→5	



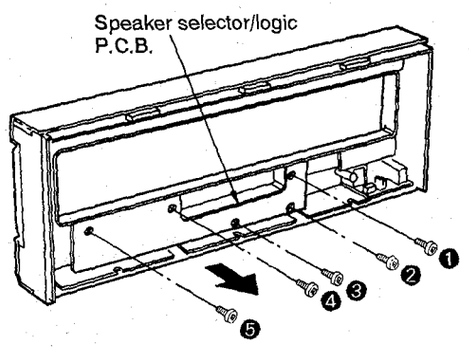
1. Remove the power switch button by pushing it from behind the front panel ass'y.
2. Remove the 2 screws(❶, ❷).

Ref.No. 6	Removal of the LED P.C.B.
Procedure 1→2→4→6	



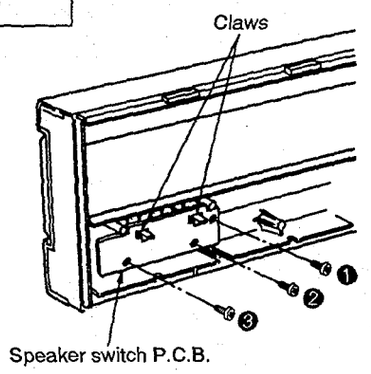
• Remove the 2 screws(❶, ❷).

Ref.No. 7	Removal of the speaker selector/logic P.C.B.
Procedure 1→2→4→7	



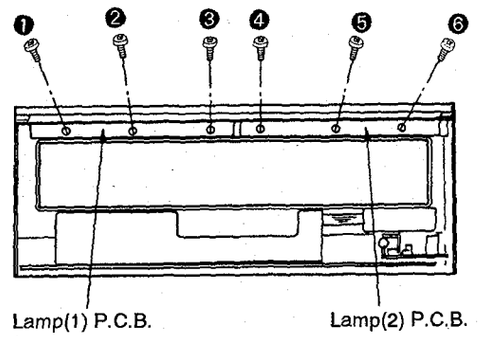
1. Remove the 5 screws(❶~❺).
2. Remove the speaker selector/logic P.C.B. in the direction of arrow.

Ref.No. 8	Removal of the speaker switch P.C.B.
Procedure 1→2→4→7→8	



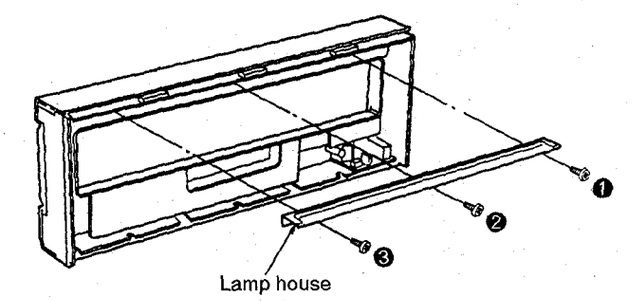
1. Remove the 3 screws(❶~❸).
2. Release the 2 claws.

Ref.No. 9	Removal of the lamp(1) P.C.B. and lamp(2) P.C.B.
Procedure 1→2→4→9	



• Remove the 6 screws(❶~❻).

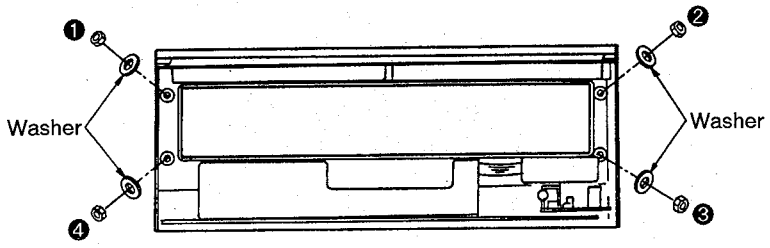
Ref.No. 10	Removal of the lamp house
Procedure 1→2→4→9→10	



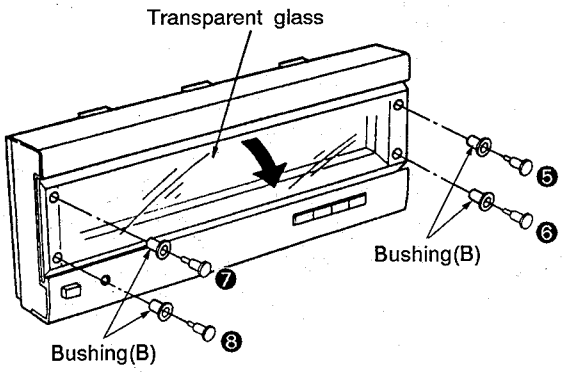
• Remove the 3 screws(❶~❸).

Ref.No. 11	Removal of the transparent glass

Procedure
1 → 2 → 4 → 11



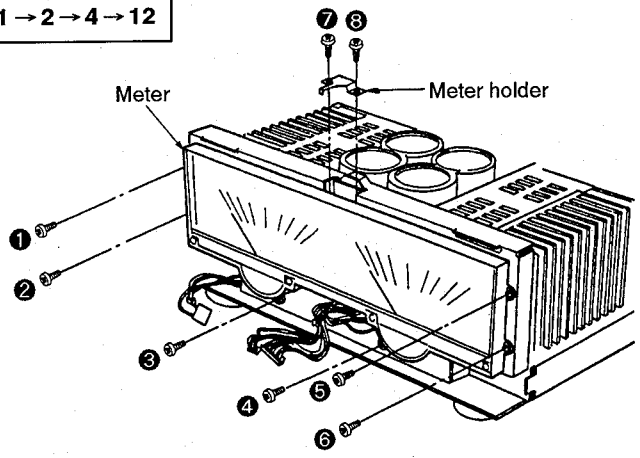
1. Remove the 4 nuts(❶ ~ ❹).
2. Remove the 4 washers.



3. Pull out the 4 screws(❺ ~ ❽) and bushing(B).
4. Remove the transparent glass in the direction of arrow.

Ref.No. 12	Removal of the meter

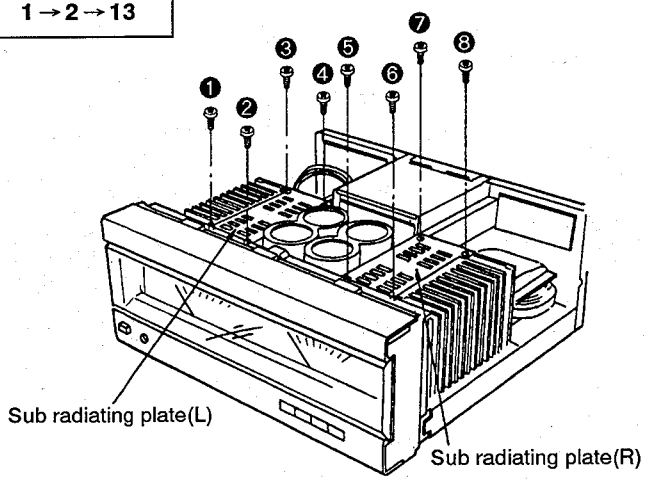
Procedure
1 → 2 → 4 → 12



1. Remove the 8 screws(❶ ~ ❽).
2. Remove the meter holder.

Ref.No. 13	Removal of the sub radiating plate (L) and sub radiating plate (R)

Procedure
1 → 2 → 13



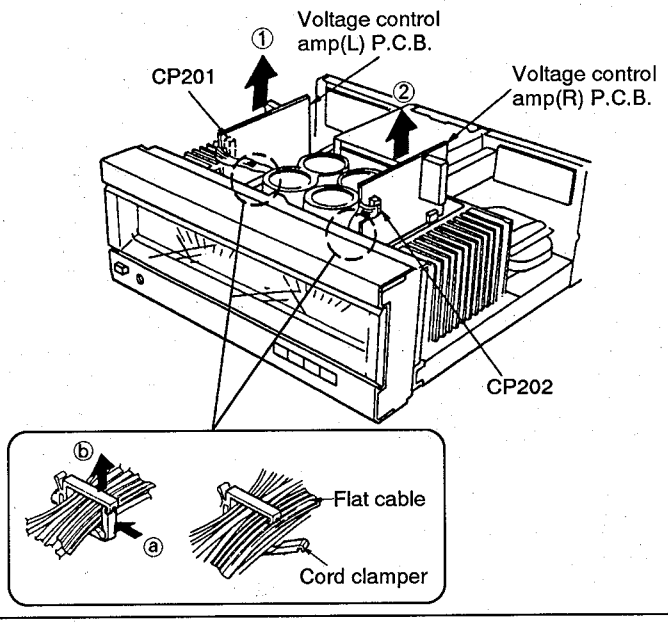
• Remove the 8 screws(❶ ~ ❽).

Ref.No. 14	Removal of the voltage control amp(L) P.C.B. and voltage control amp(R) P.C.B.

Procedure
1 → 2 → 13 → 14

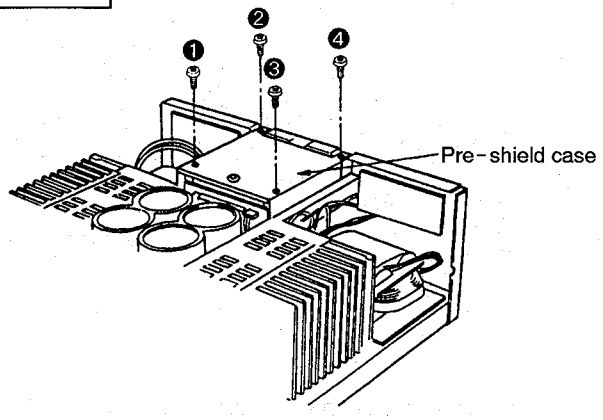
■ Removal of the voltage control amp(L) P.C.B.
1. Remove the flat cable form cord clamper.
2. Pull out the voltage control amp(L) P.C.B. in the direction of arrow ①.
3. Remove the 1 connector(CP201).

■ Removal of the voltage control amp(R) P.C.B.
1. Remove the flat cable form cord clamper.
2. Pull out the voltage control amp(R) P.C.B. in the direction of arrow ②.
3. Remove the 1 connector(CP202).



Ref.No. 15	Removal of the pre-shield case

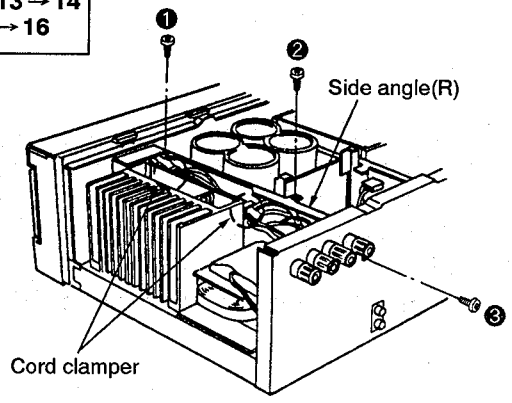
Procedure
1 → 2 → 15



• Remove the 4 screws(❶ ~ ❹).

Ref.No. 16	Removal of the side angle(R)

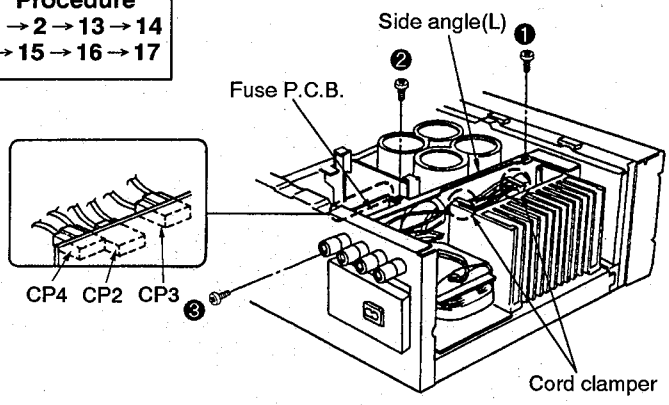
Procedure
1 → 2 → 13 → 14 → 15 → 16



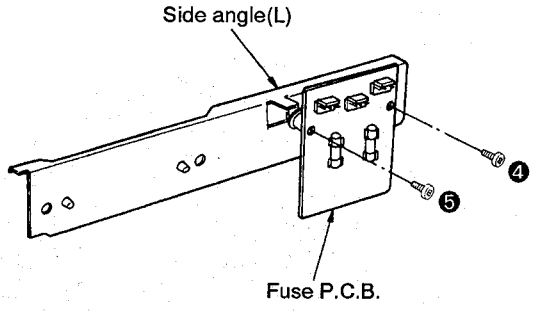
1. Remove the lead wire form cord clamper.
2. Remove the 3 screws(❶ ~ ❸).

Ref.No. 17	Removal of the side angle(L) and fuse P.C.B.

Procedure
1 → 2 → 13 → 14 → 15 → 16 → 17



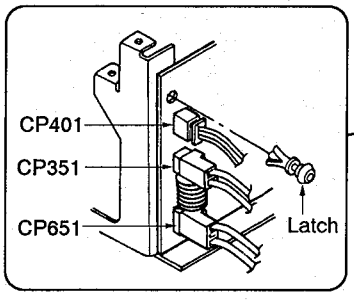
1. Remove the 3 connectors(CP2, CP3, CP4).
2. Remove the lead wire form cord clamper.
3. Remove the 3 screws(❶ ~ ❸).
4. Remove the side angle(L) and fuse P.C.B.

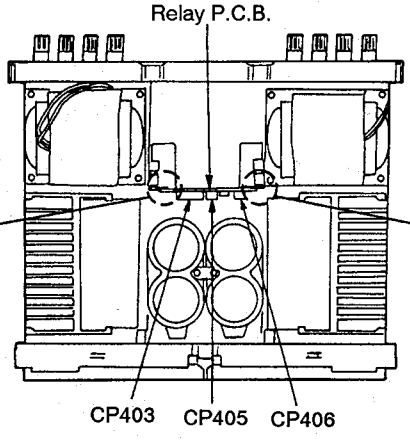


5. Remove the 2 screws(❹, ❺), and then remove the fuse P.C.B.

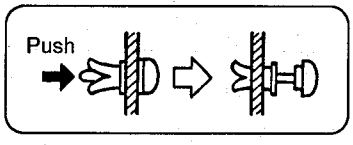
Ref.No. 18	Removal of the relay P.C.B.

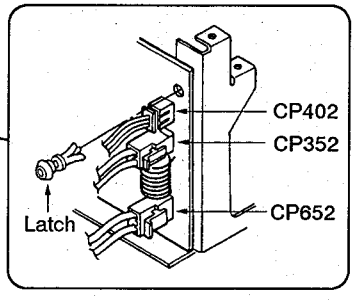
Procedure
1 → 2 → 4 → 13 → 14 → 15 → 16 → 17 → 18





■ **Removal of the latch**

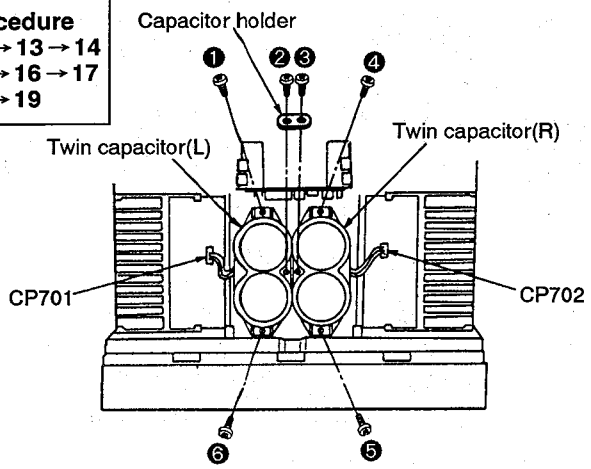




1. Remove the 2 latches.
2. Remove the 9 connectors(CP351, CP352, CP401, CP402, CP403, CP405, CP406, CP651, CP652).

Ref.No. 19	Removal of the twin capacitor(L) and twin capacitor(R)

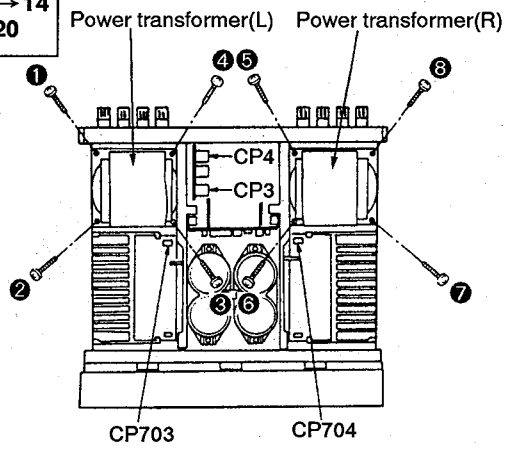
Procedure
1 → 2 → 13 → 14 → 15 → 16 → 17 → 19



1. Remove the 2 connectors(CP701, CP702)
2. Remove the 6 screws(❶ ~ ❻).
3. Remove the capacitor holder.

Ref.No. 20	Removal of the power transformer (L) and power transformer(R)

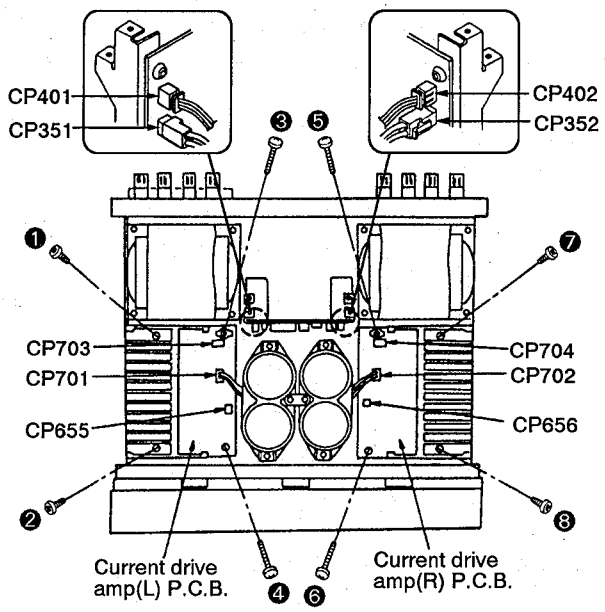
Procedure
1 → 2 → 13 → 14 → 15 → 20



1. Remove the 8 screws(❶ ~ ❽).
2. Remove the 4 connectors(CP3, CP4, CP703, CP704).

Ref.No. 21	Removal of the current drive amp(L) P.C.B. and current drive amp(R) P.C.B.

Procedure
1 → 2 → 13 → 14 → 15 → 16 → 17 → 21

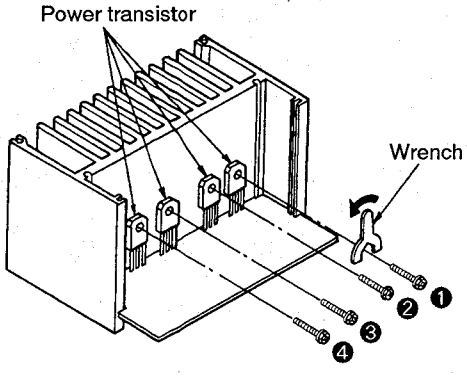


■ Removal of the current drive amp(L) P.C.B.
1. Remove the 4 screws(❶ ~ ❹).
2. Remove the 5 connectors(CP351, CP401, CP655, CP701, CP703).

■ Removal of the current drive amp(R) P.C.B.
1. Remove the 4 screws(❺ ~ ❽).
2. Remove the 5 connectors(CP352, CP402, CP656, CP702, CP704).

Ref.No. 22	Removal of the power transistor

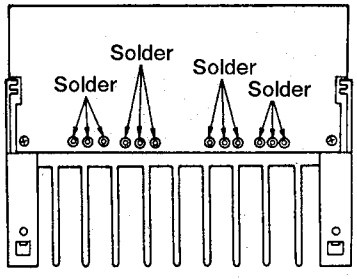
Procedure
1 → 2 → 13 → 14 → 15 → 16 → 17 → 21 → 22



1. Unsolder the power transistor.
2. Remove the 4 screws(❶ ~ ❹).

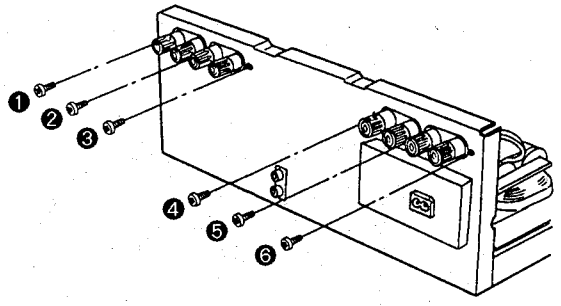
(This figure show the left (L ch) power transistor. Remove the right (R ch) power transistor in the same way.)

- When mounting the regulator transistor. Apply silicone compound (RFKX0002) to the rear side of regulator transistor.

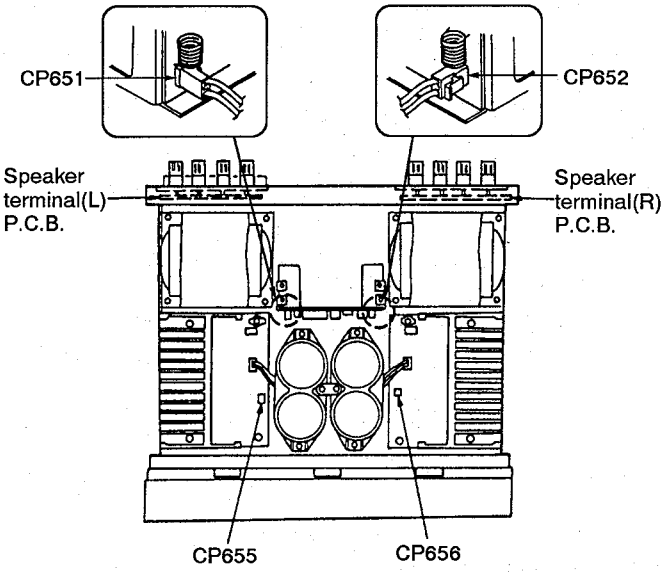


Ref.No. 23	Removal of the speaker terminal(L) P.C.B. and speaker terminal(R) P.C.B.

Procedure
1 → 2 → 13 → 14 → 15 → 16 → 17 → 23



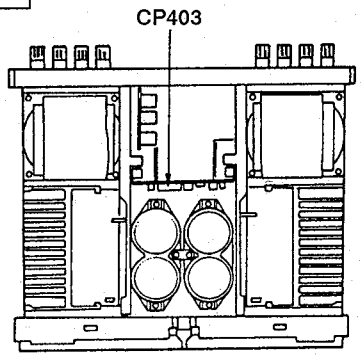
1. Remove the 6 screws(❶ ~ ❻).



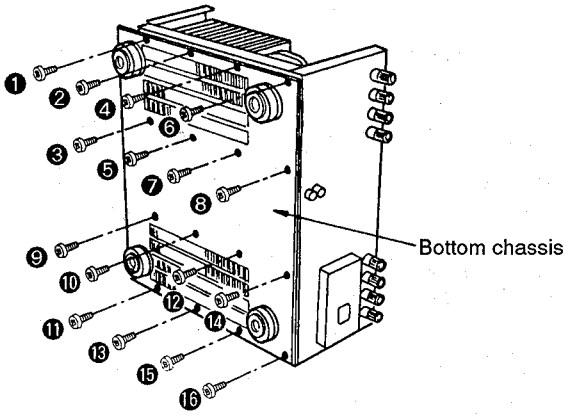
2. Remove the 4 connectors(CP651, CP652, CP655, CP656).

Ref.No. 24	Removal of the input terminal P.C.B.

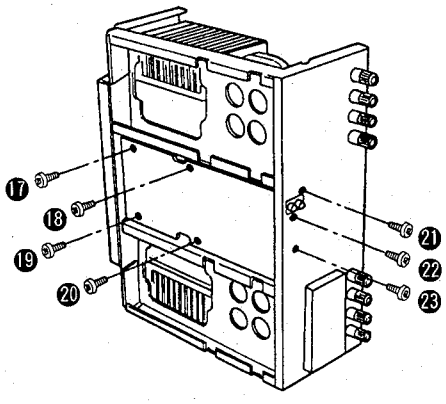
Procedure
1 → 2 → 4 → 13 → 14 → 15 → 24



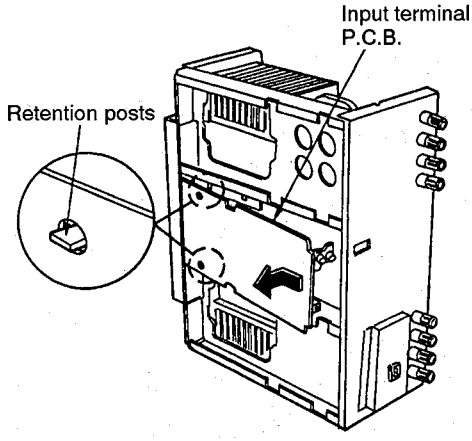
1. Remove the 1 connector(CP403).



2. Remove the 16 screws(❶ ~ ⓰).
3. Remove the bottom chassis.



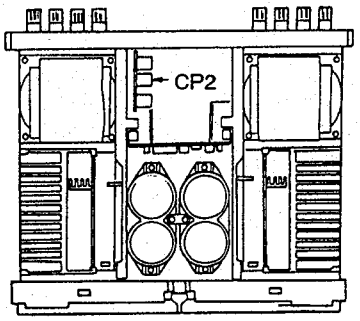
4. Remove the 7 screws(⓱ ~ ㉓).



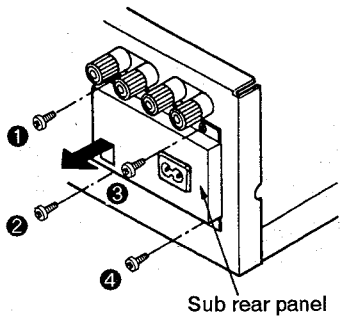
5. Lift the input terminal P.C.B. off the retention posts on the chassis ass'y.
6. Remove the input terminal P.C.B. in the direction of arrow.

Ref.No. 25	Removal of the AC inlet P.C.B.

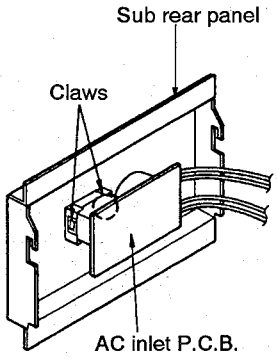
Procedure
1 → 2 → 4 → 13 → 15 → 25



1. Remove the 1 connector(CP2).



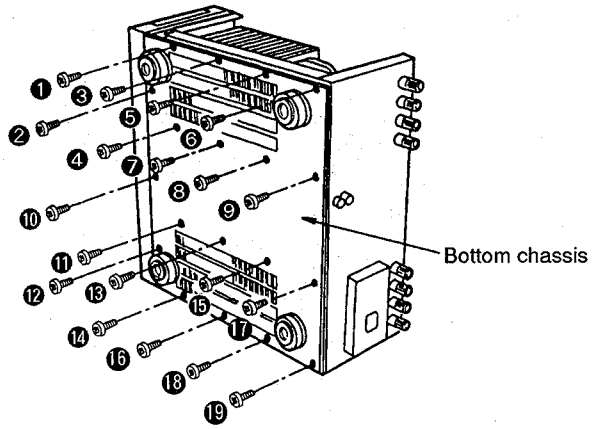
2. Remove the 4 screws(❶~❹).
3. Remove the sub rear panel in the direction of arrow.



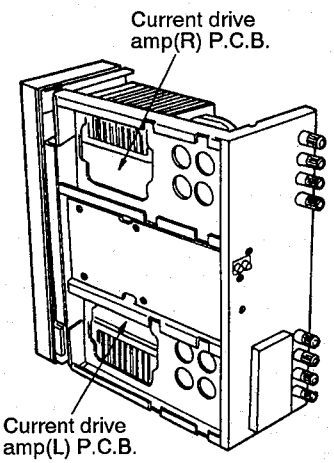
4. Release the 2 claws.

Ref.No. 26	How to check the current drive amp(L) P.C.B., current drive amp(R) P.C.B. and input terminal P.C.B.

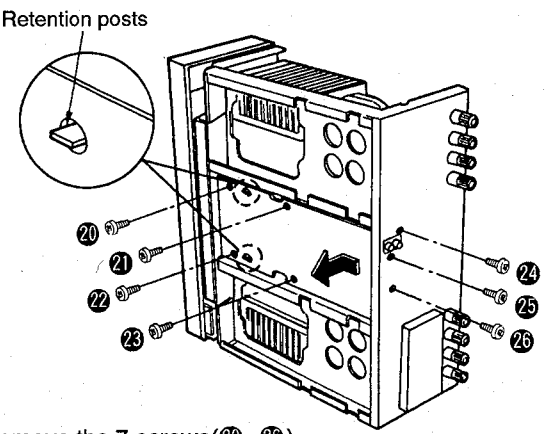
Procedure
1 → 2 → 26



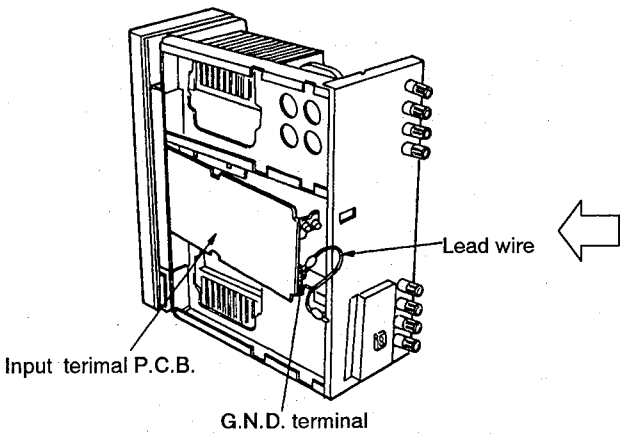
1. Remove the 19 screws(❶~⓳).
2. Remove the bottom chassis.



3. When checking the soldered surface of current drive amp (L), (R) P.C.B. and replacing the parts, do as shown.



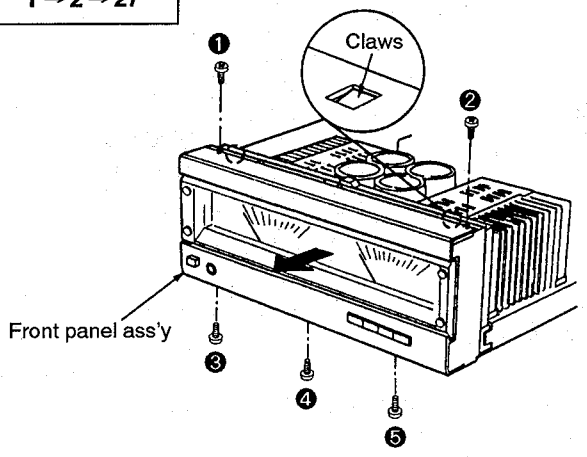
4. Remove the 7 screws(⓴~㉖).
5. Lift the input terminal P.C.B. off the retention posts on the chassis ass'y.
6. Remove the input terminal P.C.B. in the direction of arrow.



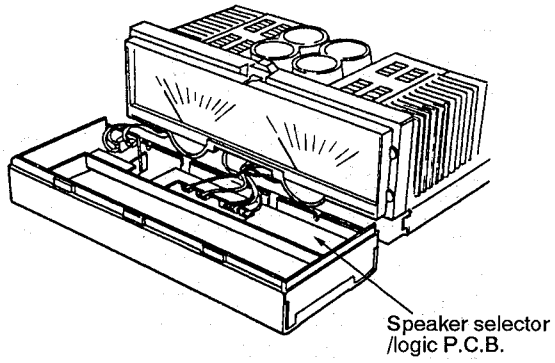
7. Connect the G.N.D. terminal to the rear panel by the lead wire.
8. When checking the soldered surface of input terminal P.C.B. and replacing the parts, do as shown.

Ref.No. 27	How to check the speaker selector /logic P.C.B.

Procedure
1 → 2 → 27



1. Remove the 5 screws(❶ ~ ❺).
2. Release the 2 claws and then remove the front panel ass'y in the direction of arrow.



3. When checking the soldered surface of speaker selector /logic P.C.B. and replacing the parts, do as shown.

Ref.No. 28	How to check the voltage control amp(L) P.C.B. and voltage control amp(R) P.C.B.

Procedure
1 → 2 → 13 → 28

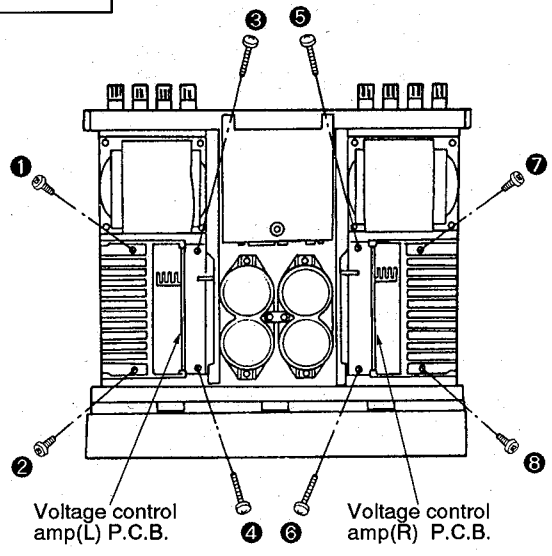


Fig. 1

1. Remove the 8 screws(❶ ~ ❽).

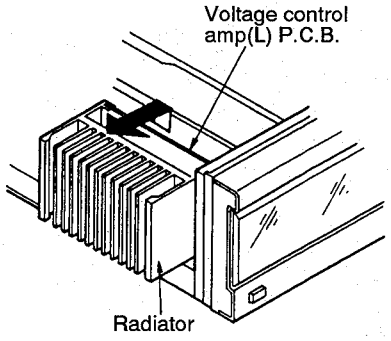


Fig. 2

2. Pull out the radiator and voltage control amp(L) P.C.B. in the direction of arrow.

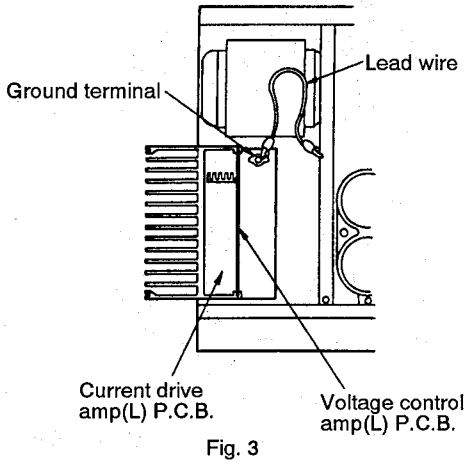
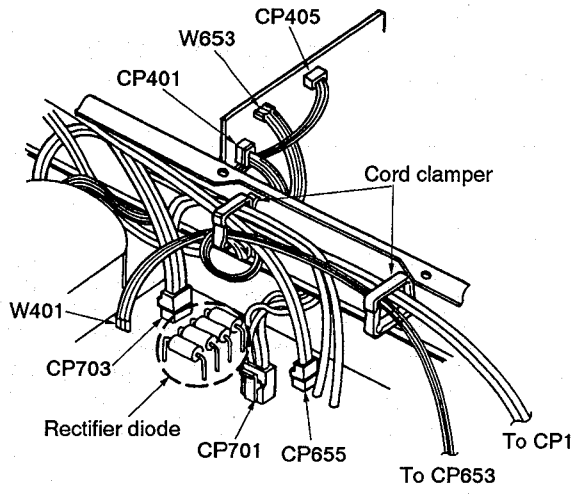


Fig. 3

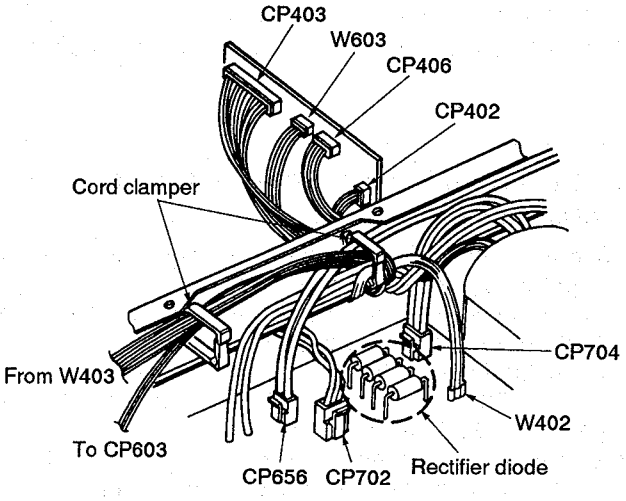
3. When checking the solderd surface of voltage control amp(L) P.C.B. and replacing the parts, do as shown.

Note:
- Connect the ground terminal of current drive amp(L) P.C.B. and chassis by lead wire.
- Figure 2 and figure 3 show the left (L ch) voltage control amp(L) P.C.B.
- Remove the right (R ch) voltage control amp(R) P.C.B. in the same way.

■ Lead wire and flat cable arrangement

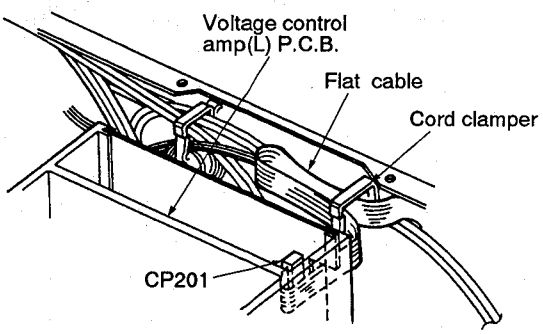


〔 **L side** 〕

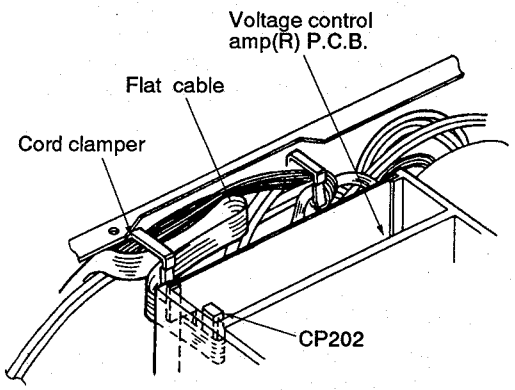


〔 **R side** 〕

1. Put the lead wires and flat cable through the cord clamper.
2. Arrange the various lead wires so that they are not touching the rectifier diode.
3. Care must be taken to avoid damage to the lead wires or flat cable.



〔 **L side** 〕



〔 **R side** 〕

4. After installing the voltage control amp(L), (R) P.C.B., put the flat cable attached to the connector (CP201, CP202) through the cord clamper.

■ MEASUREMENTS AND ADJUSTMENTS

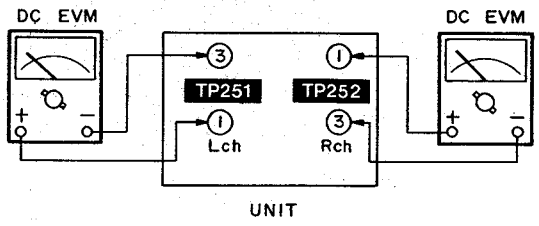
Control positions and equipment used.

- Volume knob..... ∞ (Minimum)
- AC and DC electronic voltmeter (EVM)
- AF Oscillator

(1) VOLTAGE CONTROL (V) AMP. IDLING (ICQ) ADJUSTMENT

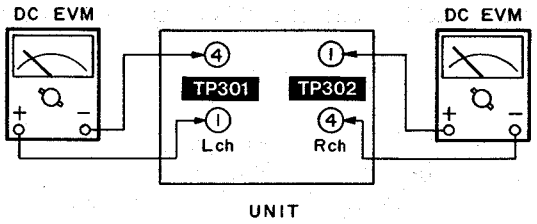
1. Connect the DC voltmeters to both channels of the amplifier, as shown on the right.
2. Set amplifier trimmer potentiometers **VR251** (L-ch.) and **VR252** (R-ch.) to center position.
3. Immediately after power-up (within 8sec. per channel), adjust **VR251** (L-ch.) and **VR252** (R-ch.) so the DC voltmeters read **70±5mV**.

Note: During adjustment, do not decrease the voltage below 30mV, as it may cause low-level oscillations.



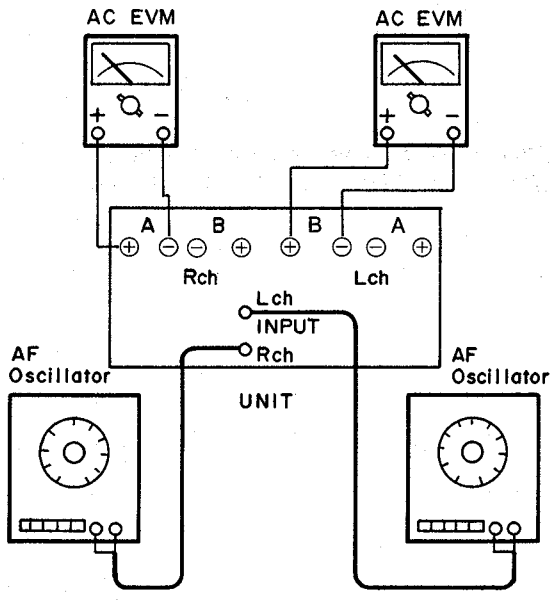
(2) CURRENT DRIVE (C) AMP. IDLING (ICQ) ADJUSTMENT

1. Connect the DC voltmeters to both channels of the amplifier, as shown on the right.
2. Turn amplifier trimmer potentiometers **VR301** (L-ch.) and **VR302** (R-ch.) fully counterclockwise.
3. Adjust **VR301** (L-ch.) and **VR302** (R-ch.) so the DC voltmeters read **3±1mV** 90 seconds after power on.

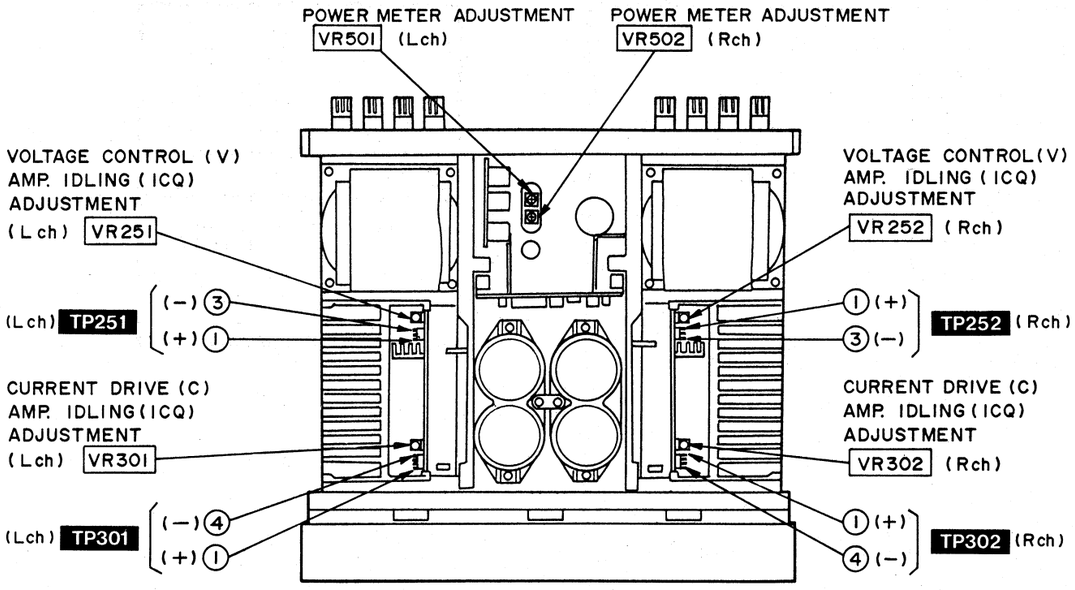


(3) POWER METER ADJUSTMENT

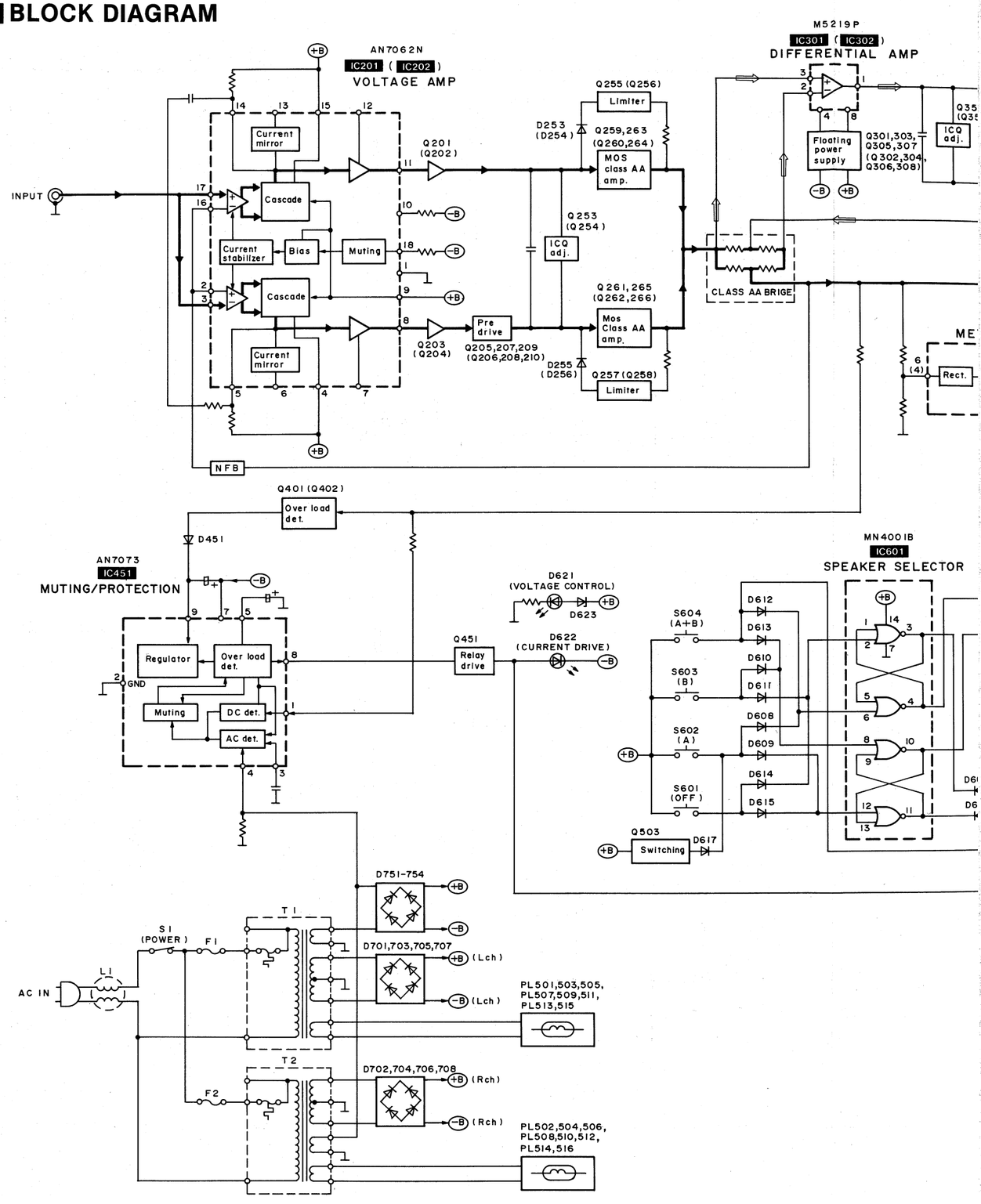
1. Connect an AF signal generator and power meter to the amplifier, as shown on the right.
2. Before powering the amplifier, set **VR501** (L-ch.) and **VR502** (R-ch.) to center position.
3. Zero adjust the power meter.
4. Apply a 1-kHz sinusoidal signal to the amplifier's input jack so the output voltage across the speaker terminals is **28.3V** (speaker load: ∞)
   (adjust the signal level with the AF generator's output attenuator).
5. Adjust **VR501** (L-ch.) and **VR502** (R-ch.) until the power meter reads **100W (0dB)**.



• **Adjustment points**



■ BLOCK DIAGRAM



NT

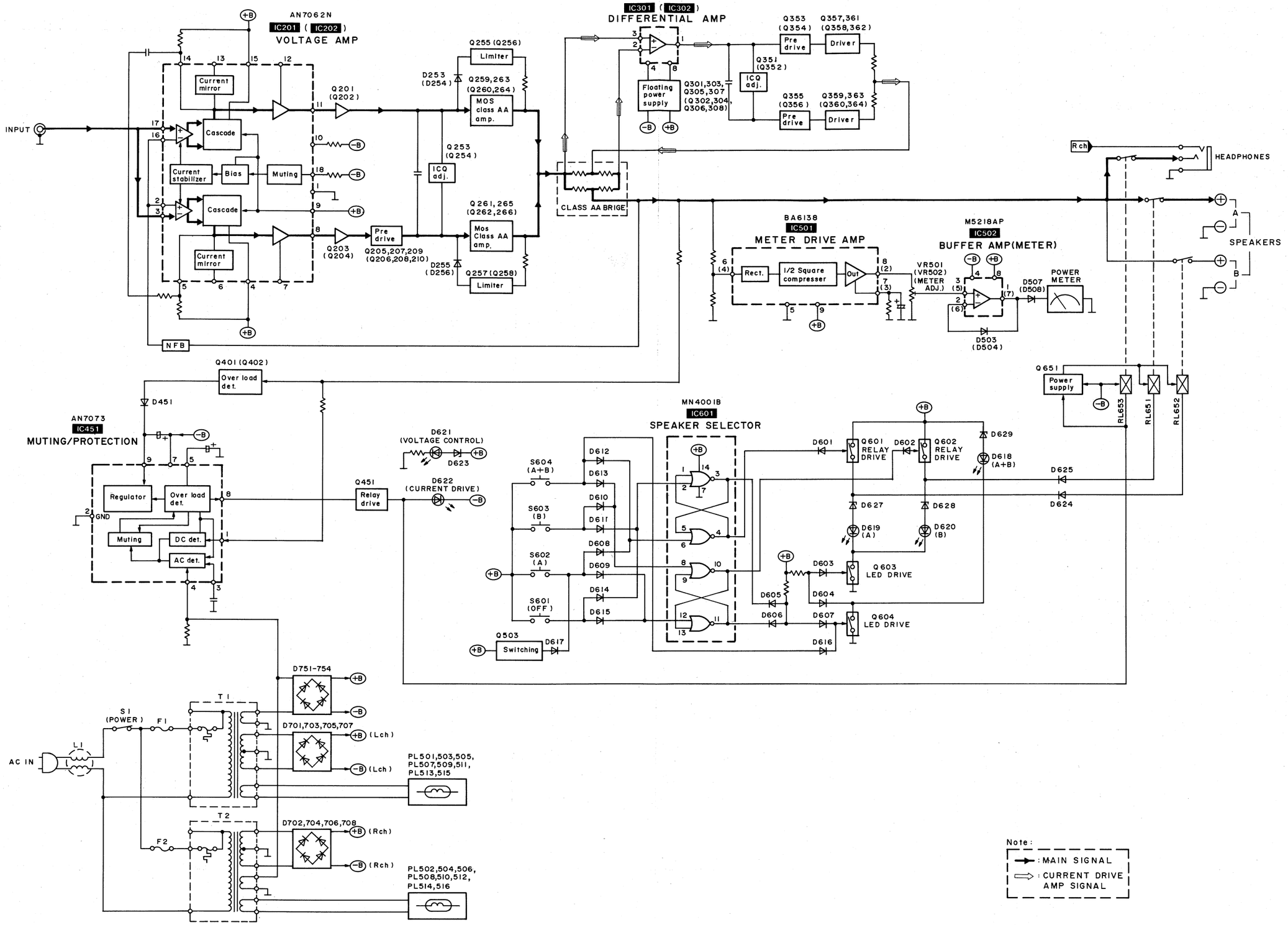
OLTAGE CONTROL (V)
MP. IDLING (ICQ)
DJUSTMENT
VR252 (Rch)

)(+)
)(−)
TP252 (Rch)

URRENT DRIVE (C)
MP. IDLING (ICQ)
DJUSTMENT
VR302 (Rch)

)(+)
)(−)
TP302 (Rch)

■ BLOCK DIAGRAM



Note:
→ : MAIN SIGNAL
⇨ : CURRENT DRIVE AMP SIGNAL

■ SCHEMATIC DIAGRAM

(Parts list on pages 42～45.)

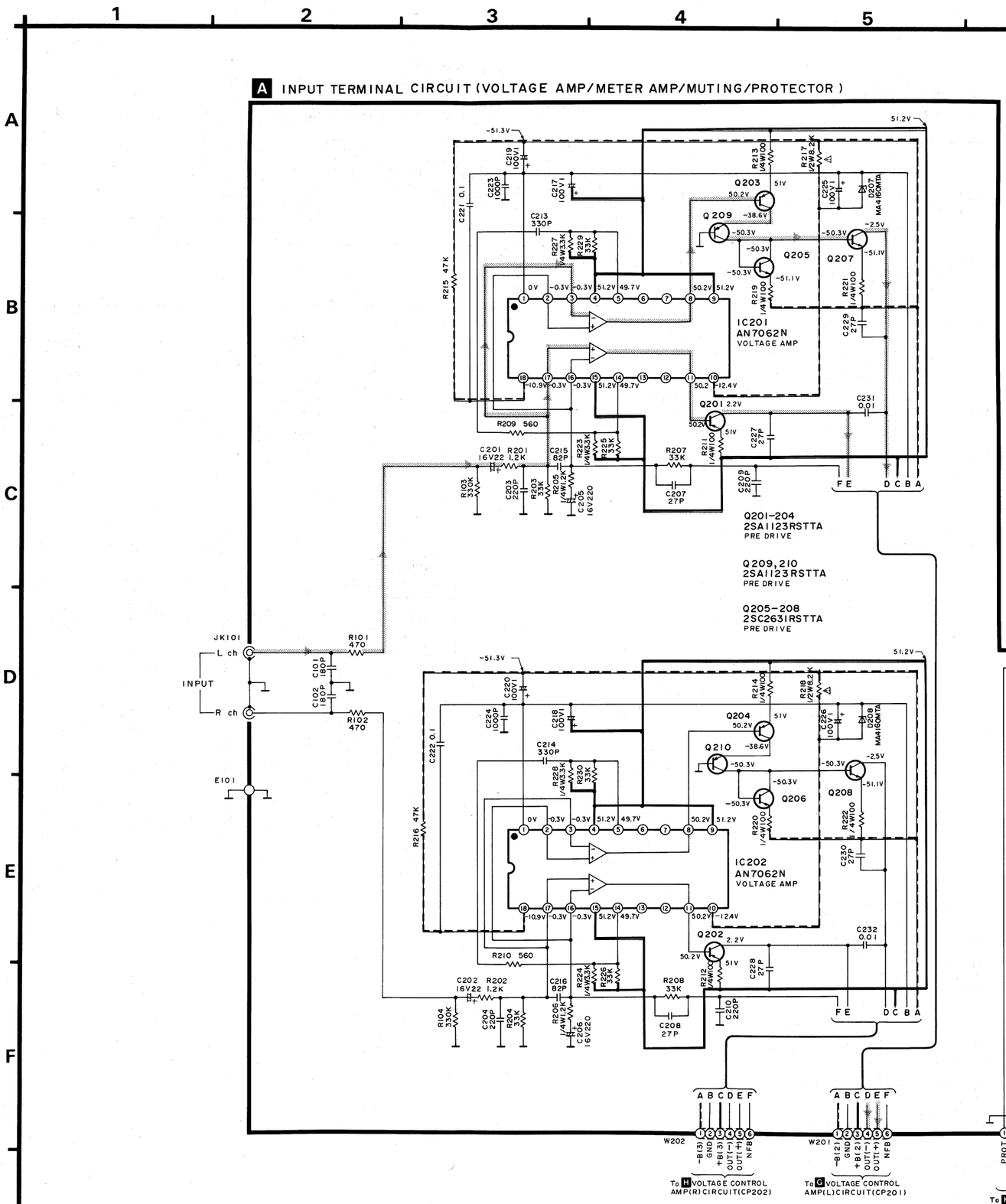
(This schematic diagram may be modified at any time with the development of new technology.)

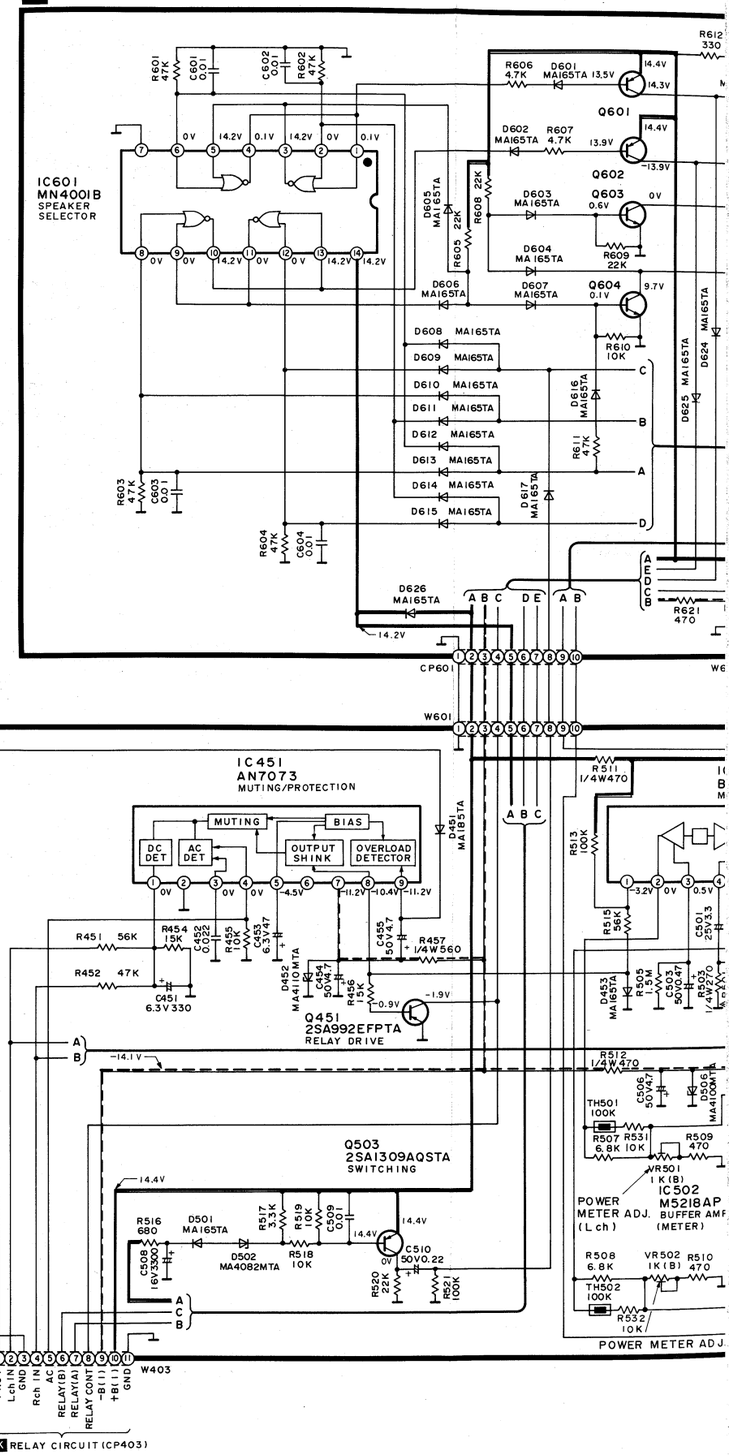
Note 1:

- S1 : Power (POWER) switch.
- S2 : Voltage Adjustment switch in "220V～240V" position.
  (110V～127V ↔ 220V～240V)
  [For (G) area.]
- S601～S604:
  Speaker selectors (SPEAKERS) switches.
  [S601: OFF, S602: A
  S603: B, S604: A+B]
- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.
- Signal line
  : Main signal (Lch)
  : Current drive amp signal (Lch)
  : +B line
  : −B line
- Important safety notice
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used as occation calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- **Caution!**

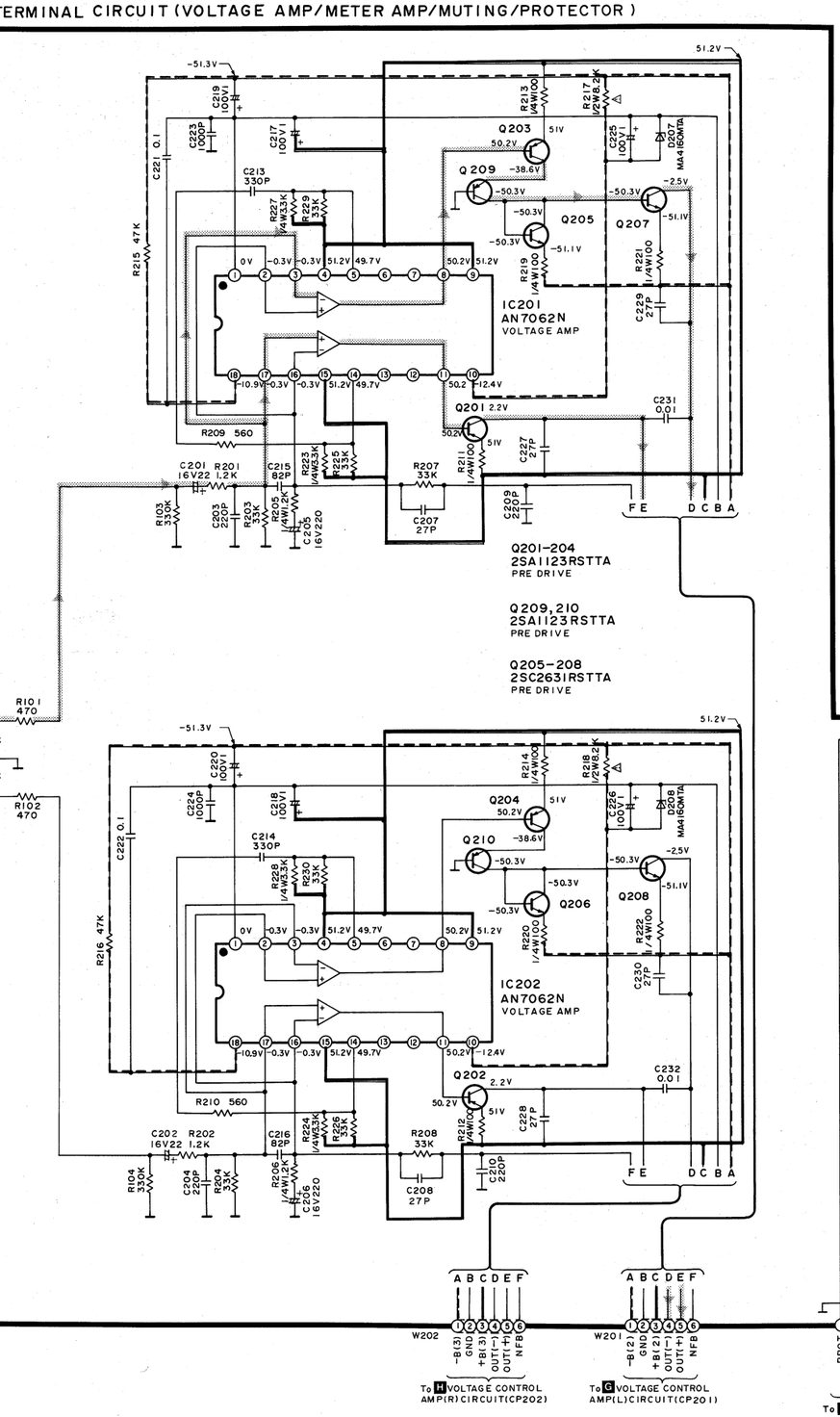
  IC and LSI are sensitive to static electricity.
  Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with alminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.



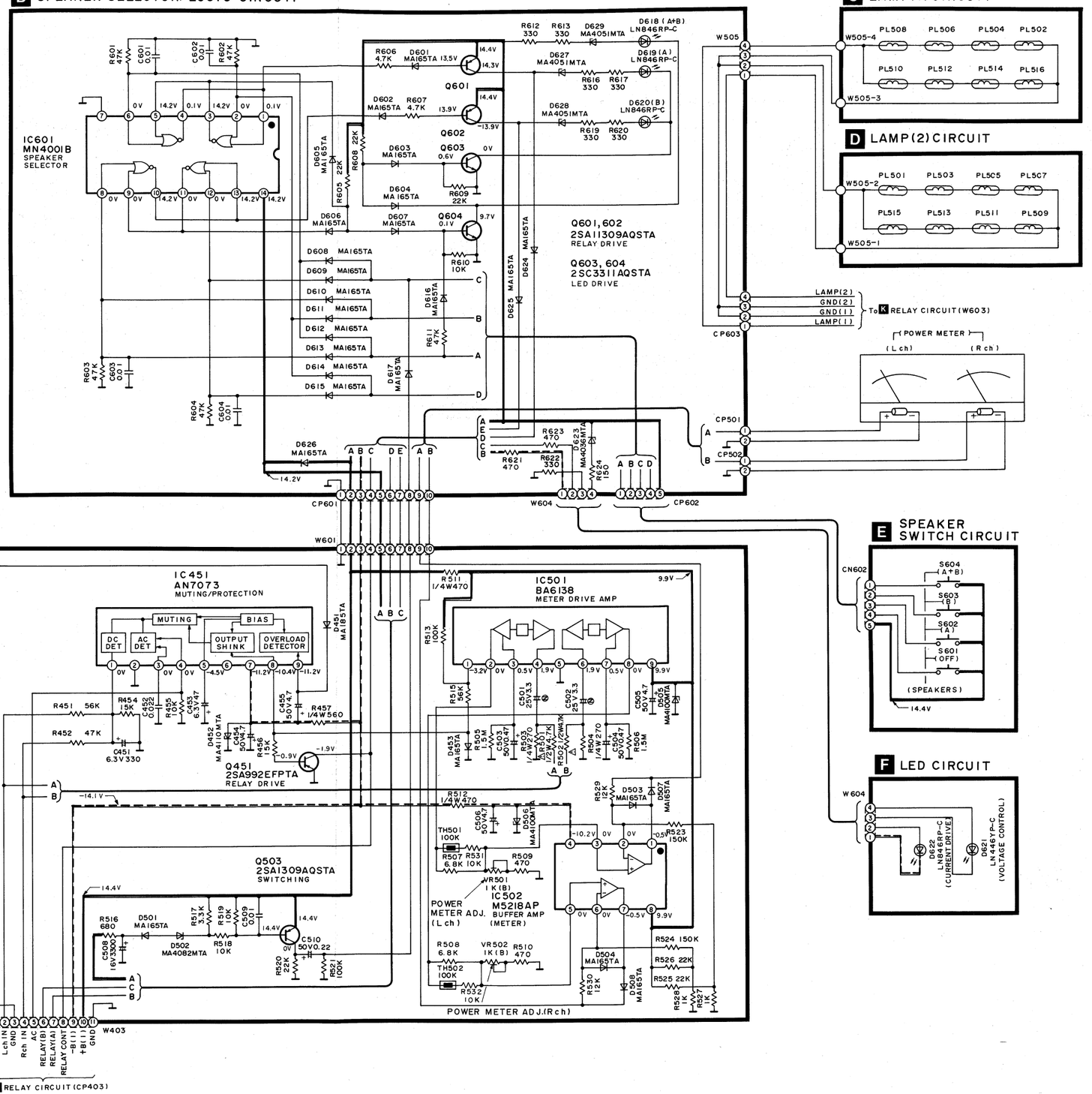


3 4 5 6 7 8 9 10 11 12

TERMINAL CIRCUIT (VOLTAGE AMP/METER AMP/MUTING/PROTECTOR)



B SPEAKER SELECTOR/LOGIC CIRCUIT



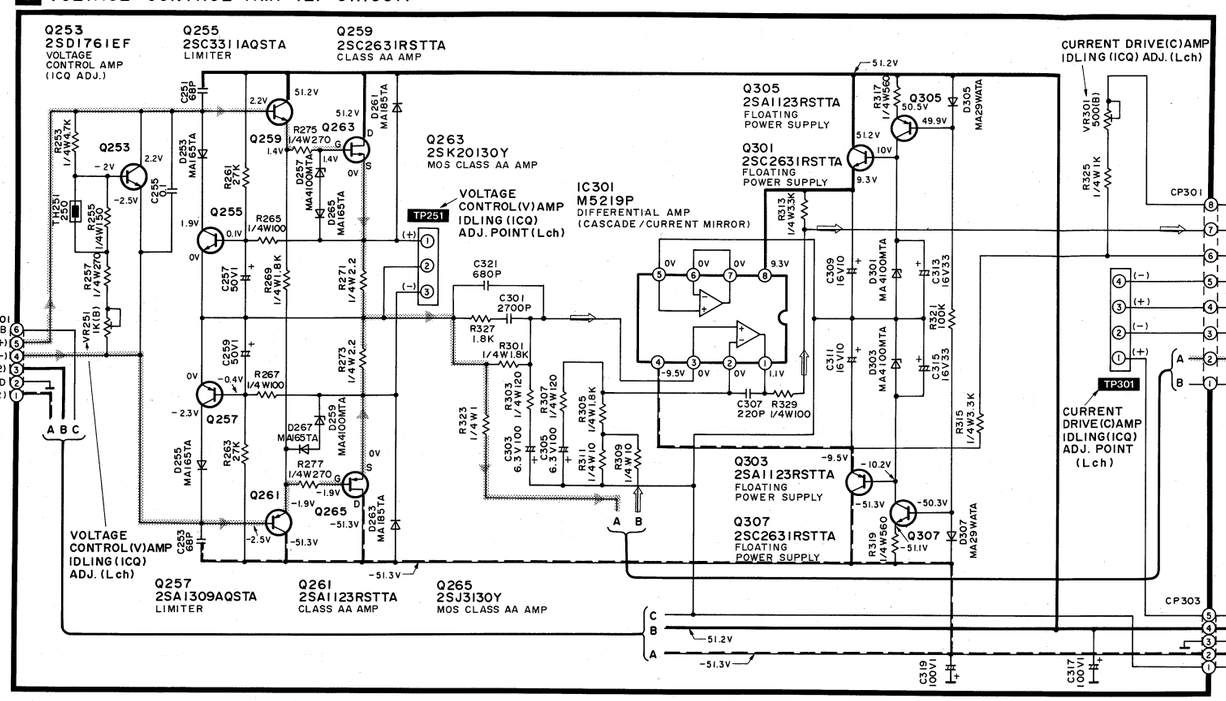
C LAMP(1) CIRCUIT

D LAMP(2) CIRCUIT

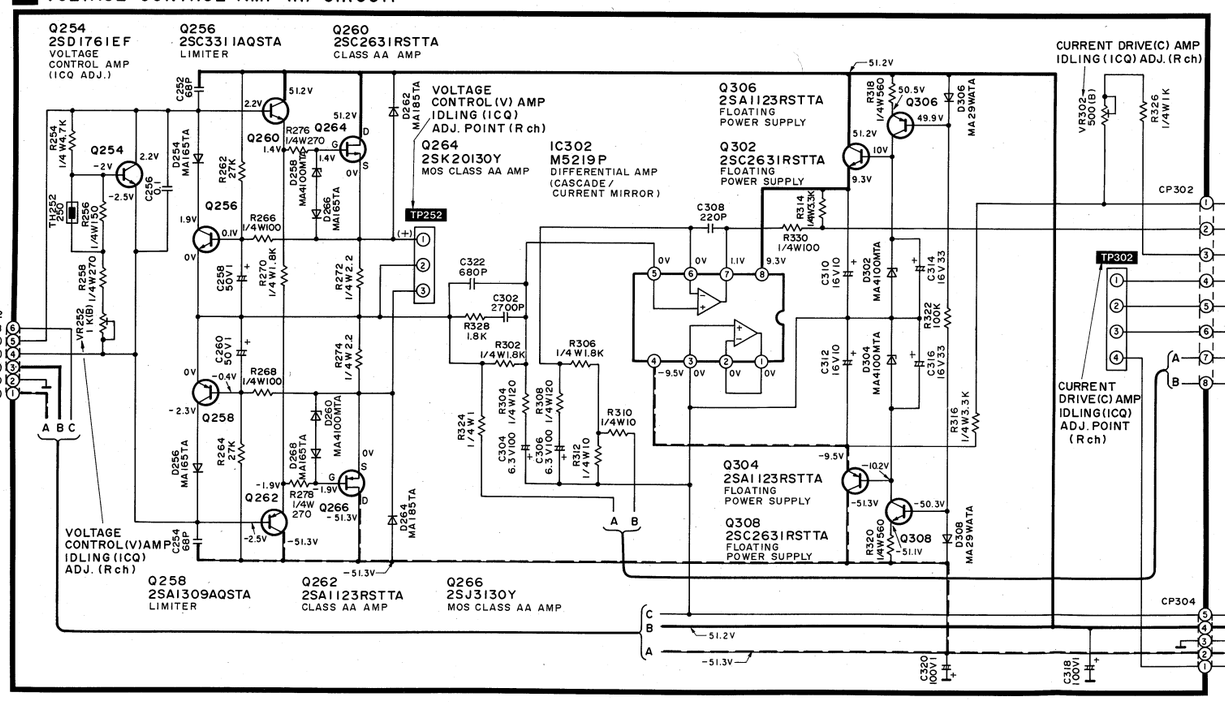
E SPEAKER SWITCH CIRCUIT

F LED CIRCUIT

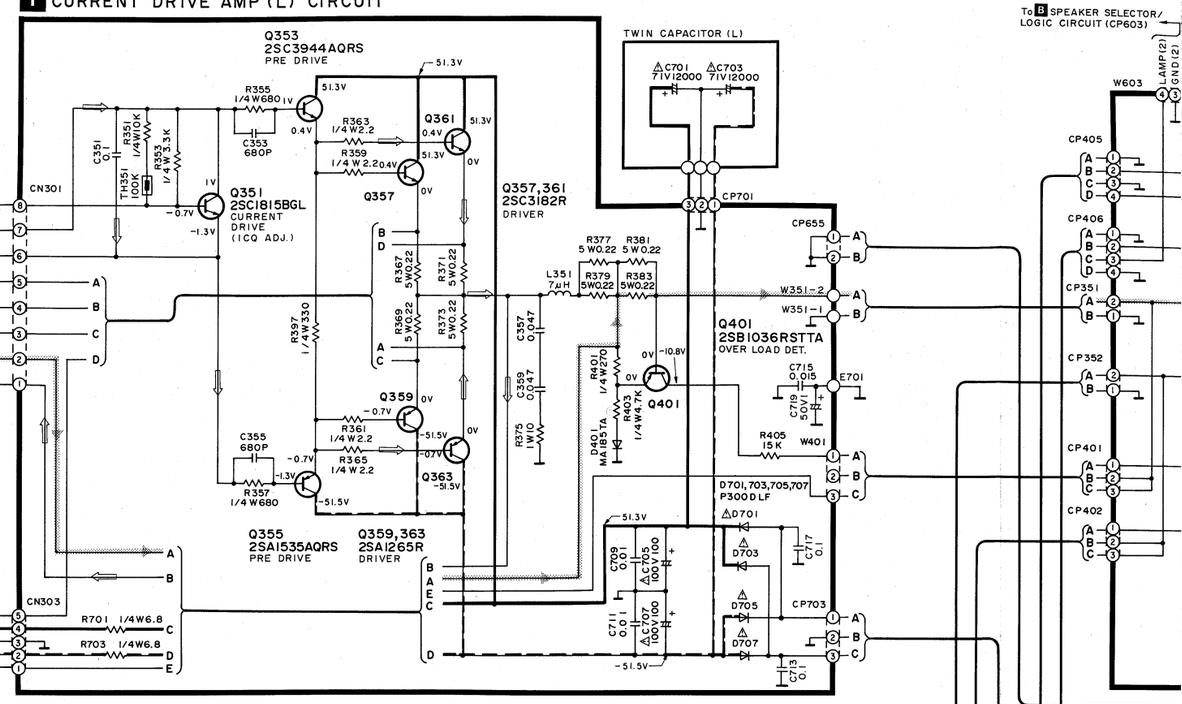
G VOLTAGE CONTROL AMP (L) CIRCUIT


Q253 2SD1761EF VOLTAGE CONTROL AMP (ICQ ADJ.)
Q255 2SC3311AQSTA LIMITER
Q259 2SC2631RSTTA CLASS AA AMP
Q263 2SK2013OY MOS CLASS AA AMP
IC301 M5219P DIFFERENTIAL AMP (CASCADE/CURRENT MIRROR)
Q305 2SA1123RSTTA FLOATING POWER SUPPLY
Q301 2SC2631RSTTA FLOATING POWER SUPPLY
Q303 2SA1123RSTTA FLOATING POWER SUPPLY
Q307 2SC2631RSTTA FLOATING POWER SUPPLY
VOLTAGE CONTROL(V)AMP IDLING(ICQ) ADJ. POINT(Lch)
VOLTAGE CONTROL(V)AMP IDLING(ICQ) ADJ.(Lch)
CURRENT DRIVE(C)AMP IDLING(ICQ) ADJ.(Lch)
CURRENT DRIVE(C)AMP IDLING(ICQ) ADJ. POINT (Lch)
To A INPUT TERMINAL CIRCUIT(W201)
Q257 2SA1309AQSTA LIMITER
Q261 2SA1123RSTTA CLASS AA AMP
Q265 2SJ3130Y MOS CLASS AA AMP

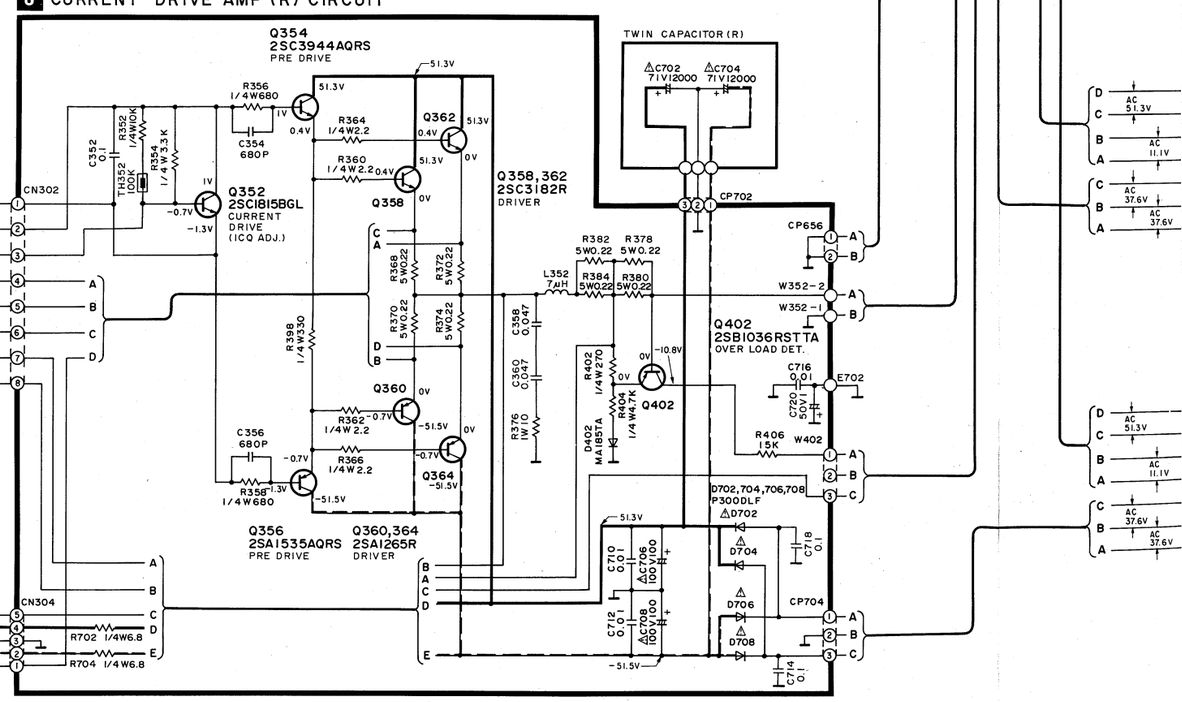
H VOLTAGE CONTROL AMP (R) CIRCUIT


Q254 2SD1761EF VOLTAGE CONTROL AMP (ICQ ADJ.)
Q256 2SC3311AQSTA LIMITER
Q260 2SC2631RSTTA CLASS AA AMP
Q264 2SK2013OY MOS CLASS AA AMP
IC302 M5219P DIFFERENTIAL AMP (CASCADE/CURRENT MIRROR)
Q306 2SA1123RSTTA FLOATING POWER SUPPLY
Q302 2SC2631RSTTA FLOATING POWER SUPPLY
Q304 2SA1123RSTTA FLOATING POWER SUPPLY
Q308 2SC2631RSTTA FLOATING POWER SUPPLY
VOLTAGE CONTROL(V) AMP IDLING (ICQ) ADJ. POINT (Rch)
VOLTAGE CONTROL(V)AMP IDLING(ICQ) ADJ.(Rch)
CURRENT DRIVE(C) AMP IDLING (ICQ) ADJ. (Rch)
CURRENT DRIVE(C)AMP IDLING(ICQ) ADJ. POINT (Rch)
To A INPUT TERMINAL CIRCUIT(W202)
Q258 2SA1309AQSTA LIMITER
Q262 2SA1123RSTTA CLASS AA AMP
Q266 2SJ3130Y MOS CLASS AA AMP

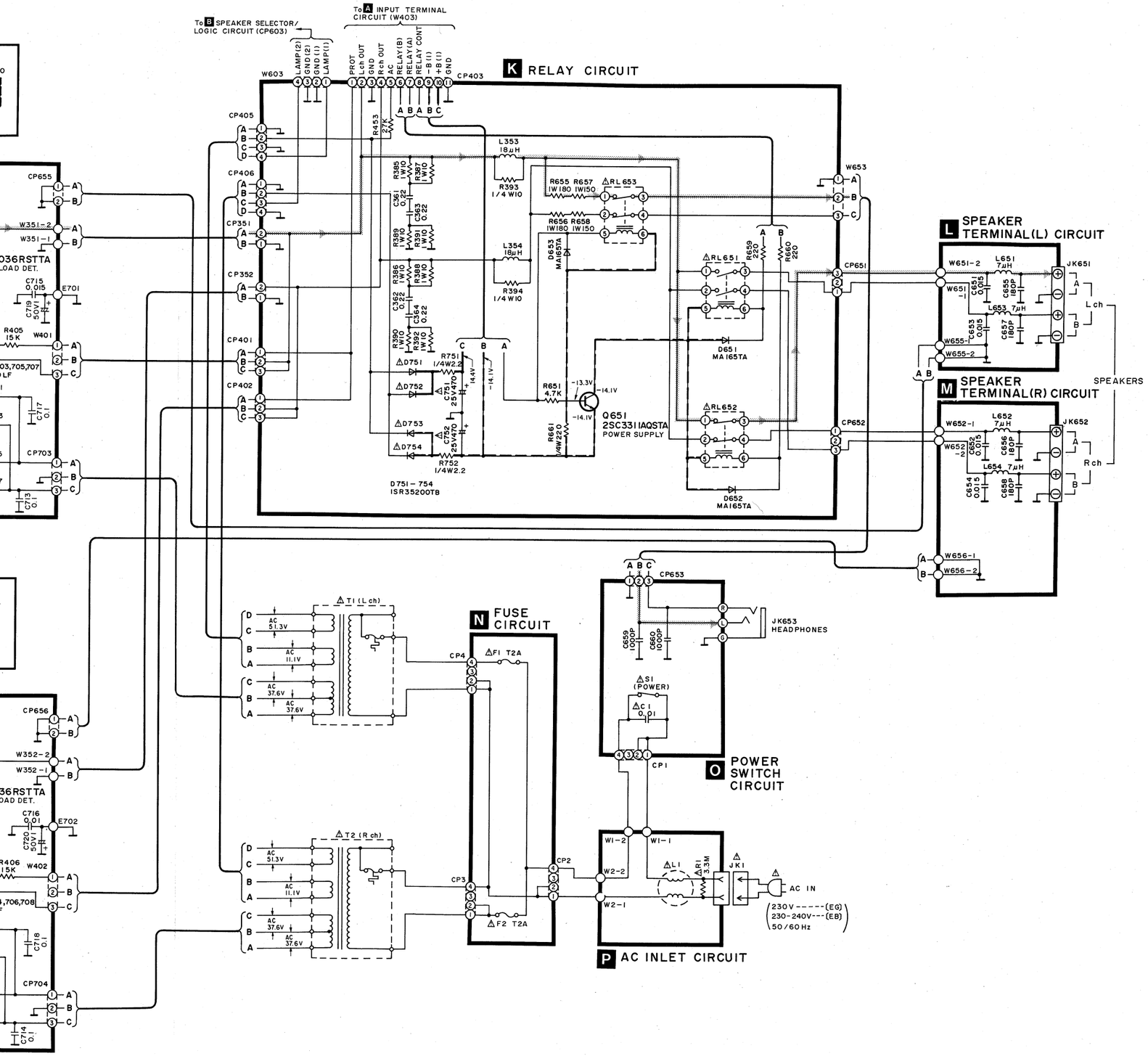
I CURRENT DRIVE AMP (L) CIRCUIT


Q353 2SC3944AQRS PRE DRIVE
Q351 2SC1815BGL CURRENT DRIVE (ICQ ADJ.)
Q355 2SA1535AQRS PRE DRIVE
Q359,363 2SA1265R DRIVER
Q357,361 2SC3182R DRIVER
Q401 2SB1036RSTTA OVER LOAD DET.
TWIN CAPACITOR (L)
To B SPEAKER SELECTOR/ LOGIC CIRCUIT (CP603)
D701,703,705,707 P300DLF

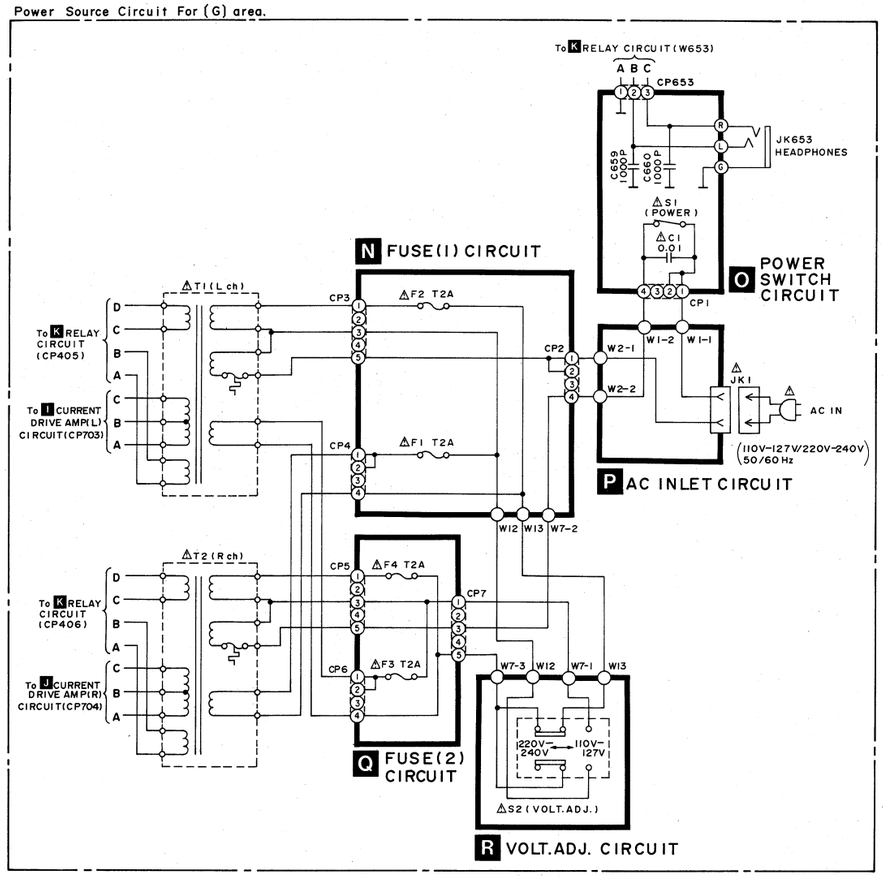
J CURRENT DRIVE AMP (R) CIRCUIT



22 23 24 25 26 27 28 29 30 31

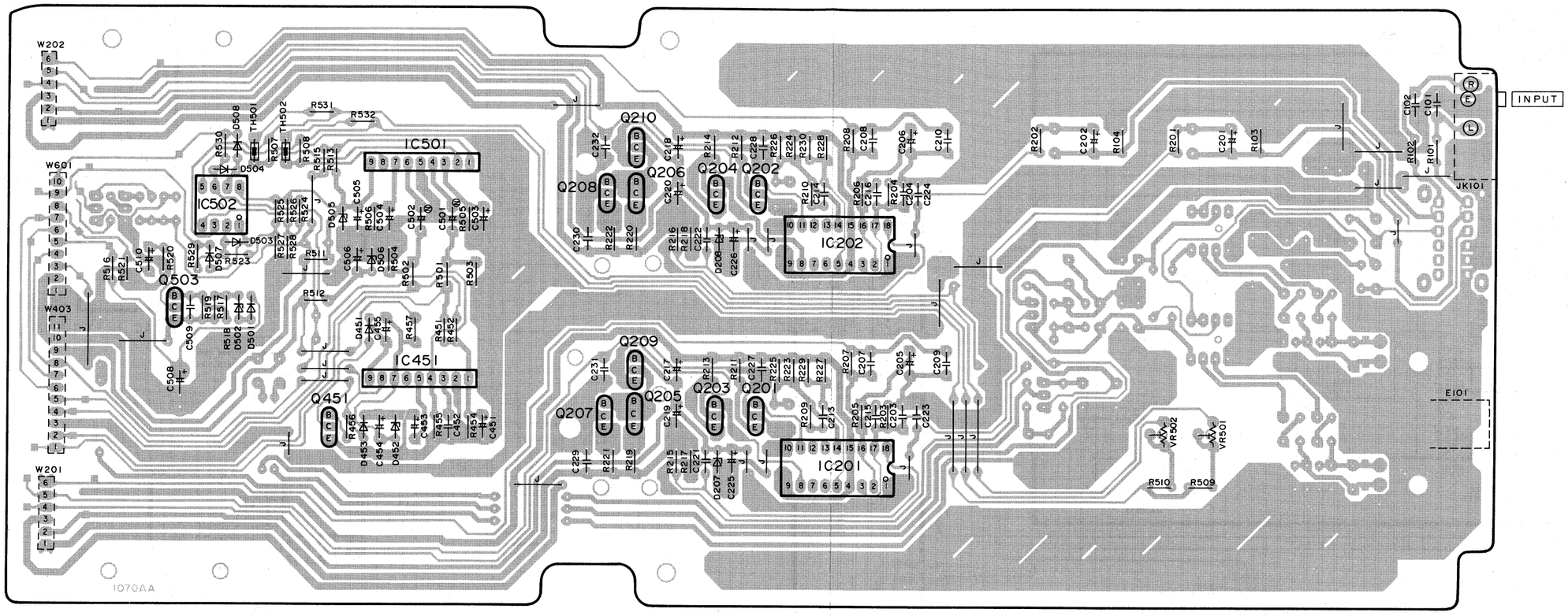


Power Source Circuit For (G) area.

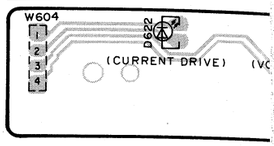


■PRINTED CIRCUIT BOARDS DIAGRAM

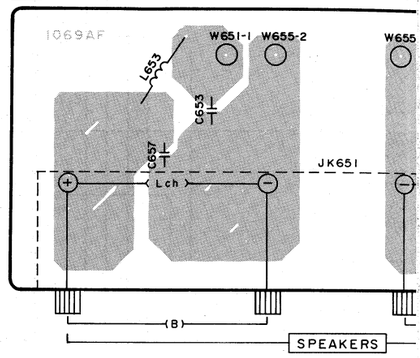
A INPUT TERMINAL P.C.B. (REP1616A-S···(EB,EG) / REP1616B-S···(G))



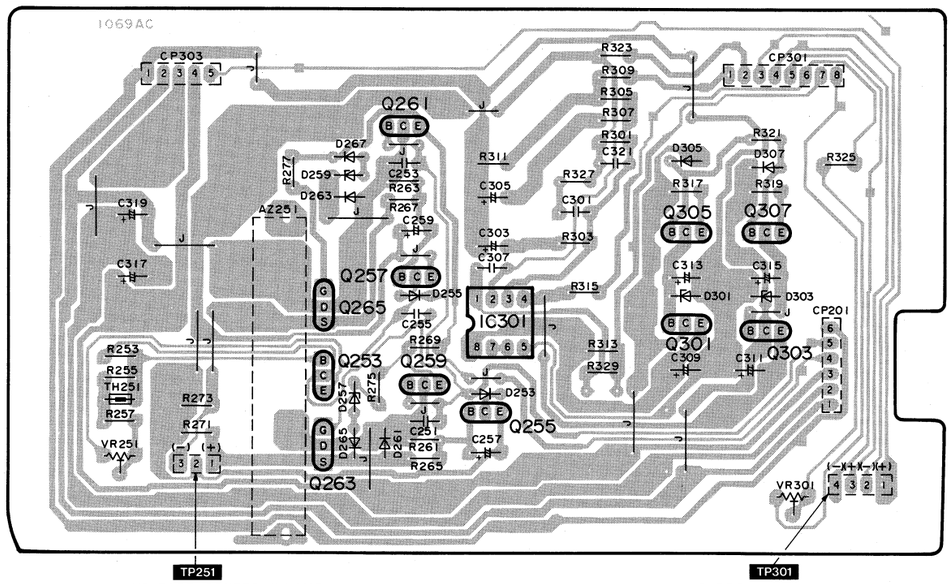
F LED P.C.B. (REP1616A / REP1616E)



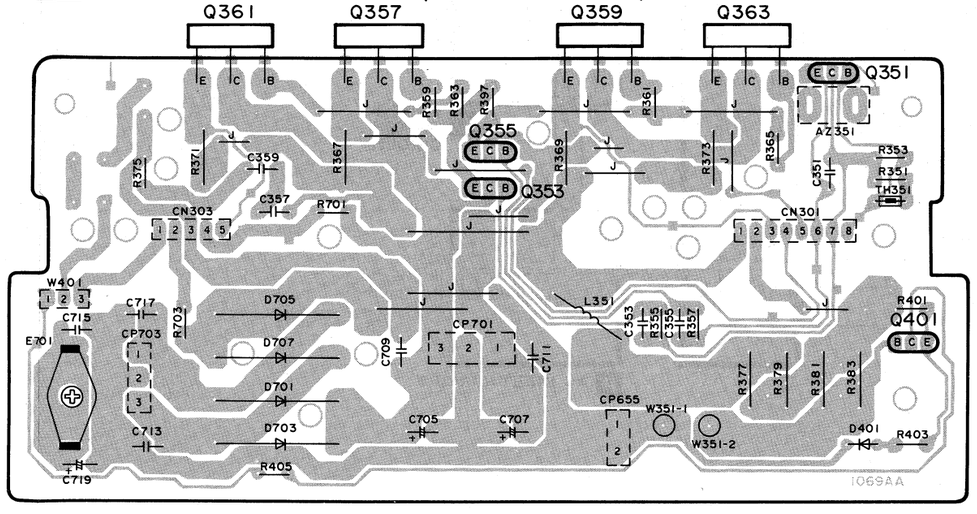
L SPEAKER TERMINAL (L) P.C.B. (R



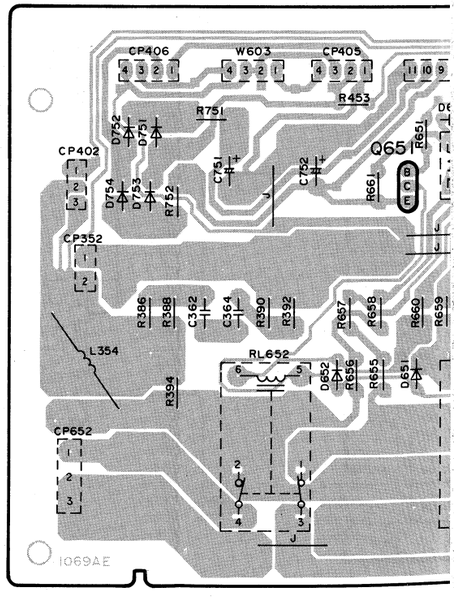
G VOLTAGE CONTROL AMP (L) P.C.B. (REP1615A-M···(EB,EG) / REP1615B-M···(G))



I CURRENT DRIVE AMP(L) P.C.B. (REP1615A-M···(EB,EG) / REP1615B-M···(G))

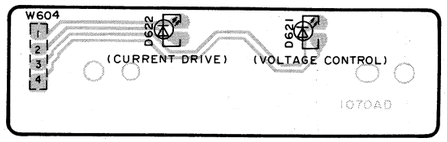


K RELAY P.C.B. (REP1615A-M···(EB,EG) / REP1615B-M···(G))

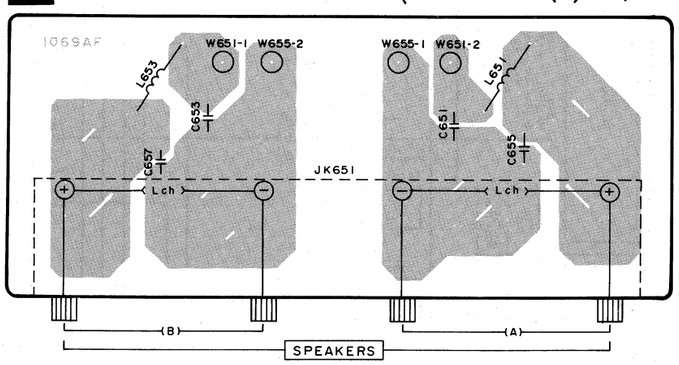


9 10 11 12 13 14 15 16 17 18 19

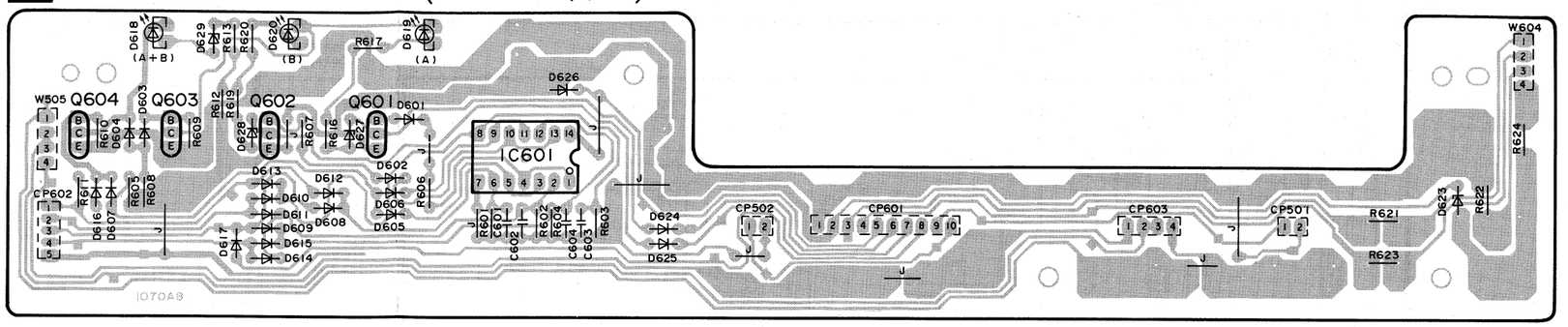
F LED P.C.B. (REP1616A-S···(EB,EG) / REP1616B-S···(G))



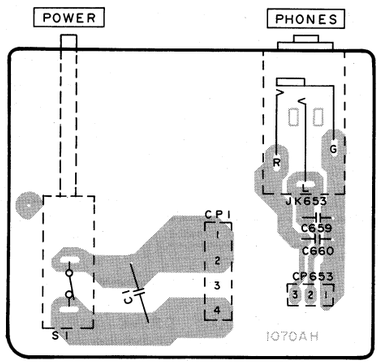
L SPEAKER TERMINAL (L) P.C.B. (REP1615A-M···(EB,EG) / REP1615B-M···(G))



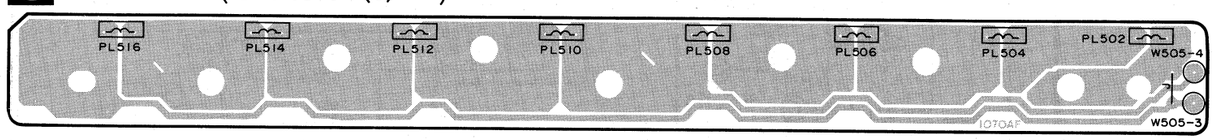
B SPEAKER SELECTOR/LOGIC P.C.B. (REP1616A-S···(EB,EG) / REP1616B-S···(G))



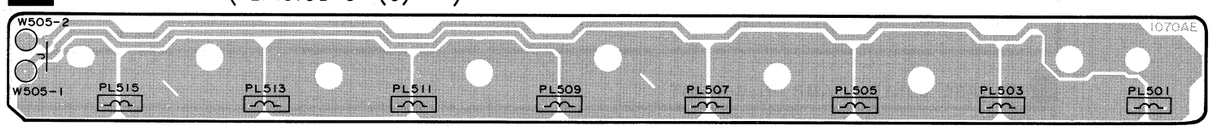
O POWER SWITCH P.C.B. (REP1616A-S···(EB,EG))



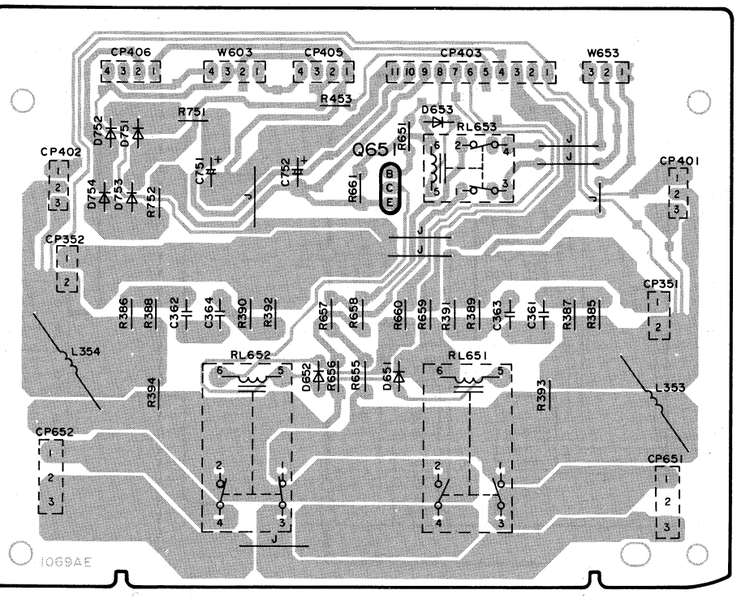
C LAMP(1) P.C.B. (REP1616A-S···(EB,EG) / REP1616B-S···(G))



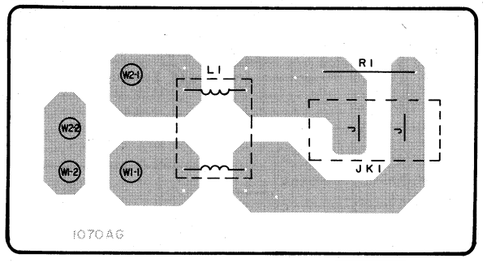
D LAMP (2) P.C.B. (REP1616A-S···(EB,EG) / REP1616B-S···(G))



K RELAY P.C.B. (REP1615A-M···(EB,EG) / REP1615B-M···(G))

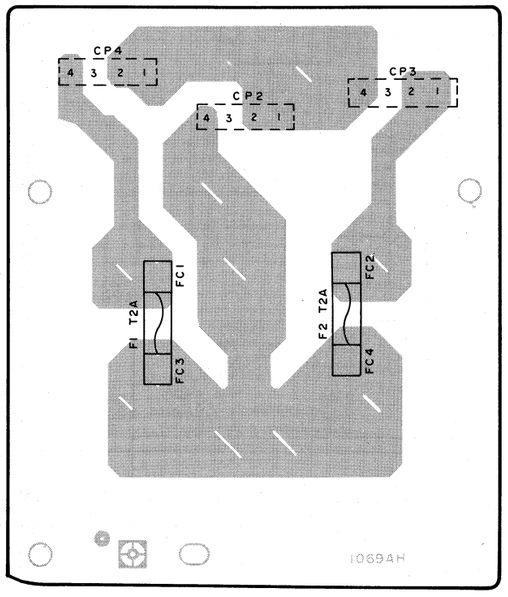


P AC INLET P.C.B. (REP1616A-S···(EB,EG))

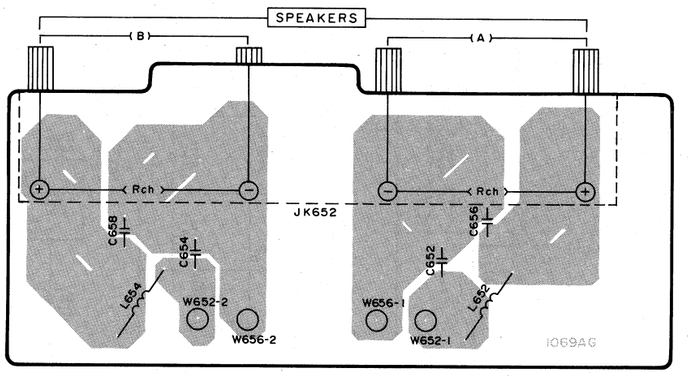


AC IN
(230V·····(EG)
230-240V··(EB)
50/60Hz)

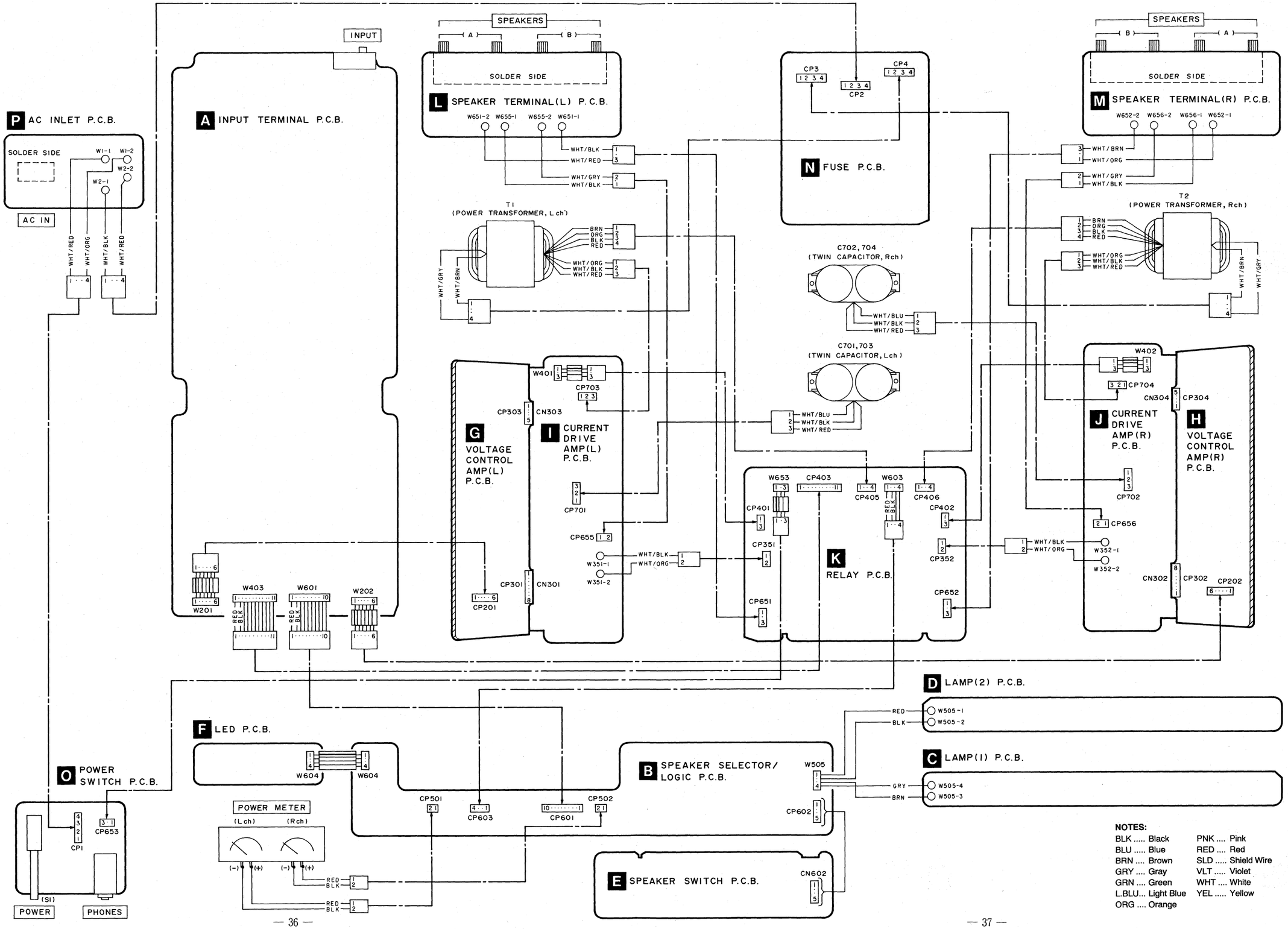
N FUSE P.C.B. (REP1615A-M···(EB,EG))



M SPEAKER TERMINAL (R) P.C.B. (REP1615A-M···(EB,EG) / REP1615B-M···(G))



■ WIRING CONNECTION DIAGRAM



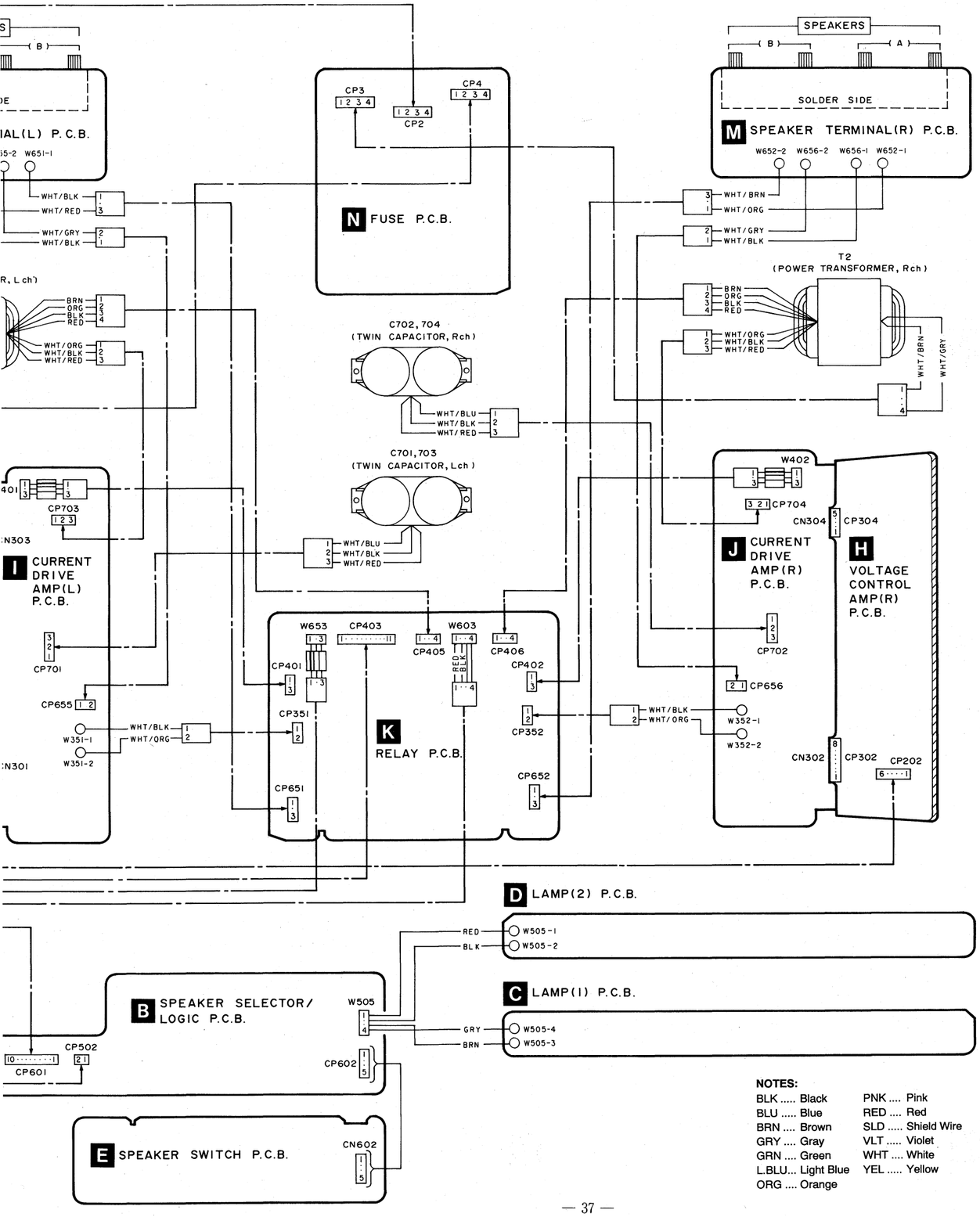
NOTES:

BLK ..... Black	PNK .... Pink
BLU ..... Blue	RED .... Red
BRN .... Brown	SLD ..... Shield Wire
GRY .... Gray	VLT ..... Violet
GRN .... Green	WHT .... White
L.BLU... Light Blue	YEL ..... Yellow
ORG .... Orange	

■ REPLACE

Note: *The parenthesi
Parts without t

Ref. No.	Part No.
1	RGK0397-K
2	RFKNA2000EG/
3	RFKNA2000EG
4	RHD30034
5	RFKKEA2000E
6	SNE2095-5
7	SNE2129-3
8	XTBS3+8JFZ1
9	RFKEA2000EG
10	RGQ0085-K
11	RGR0069B-B
12	RGR0172A-A
12	RGR0172A-B
12	RGR0172B-A
13	RKU0018-2
14	RMA0250
15	RMA0251
16	RMA0697
17	RMA0698
18	RFKNA2000EC
19	RFKNA2000EC
20	RMQ0112-1
21	RMQ0113
22	RMQ0114
23	RSC0077A
24	RSC0078A
25	RSE0003
26	RFKGEA2000
27	RGK0557-T
28	RGL0192-Q
29	RGL0193-Q
30	RGU0512C-K
31	RGU0890-K
32	RHD30042
33	RHN30004
34	RMA0699
35	RMG0308-K
36	XTBS26+8J
37	XTWS3+8T
38	XWG3
39	SHE187-2
40	SHR415
41	SHR9814
42	SJS9231A



NOTES:

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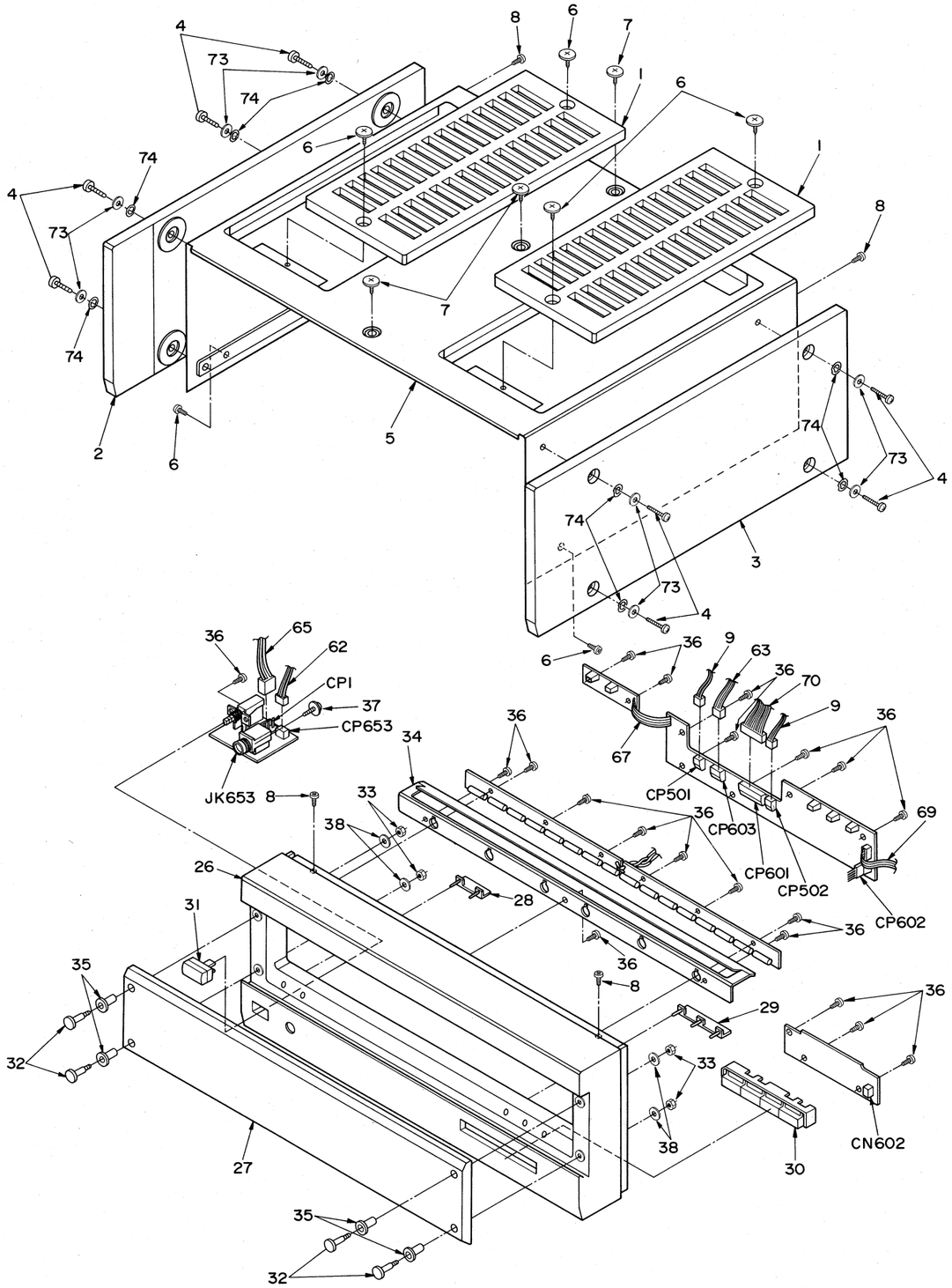
GRN .... Green	WHT .... White
L.BLU... Light Blue	YEL ..... Yellow
ORG .... Orange	

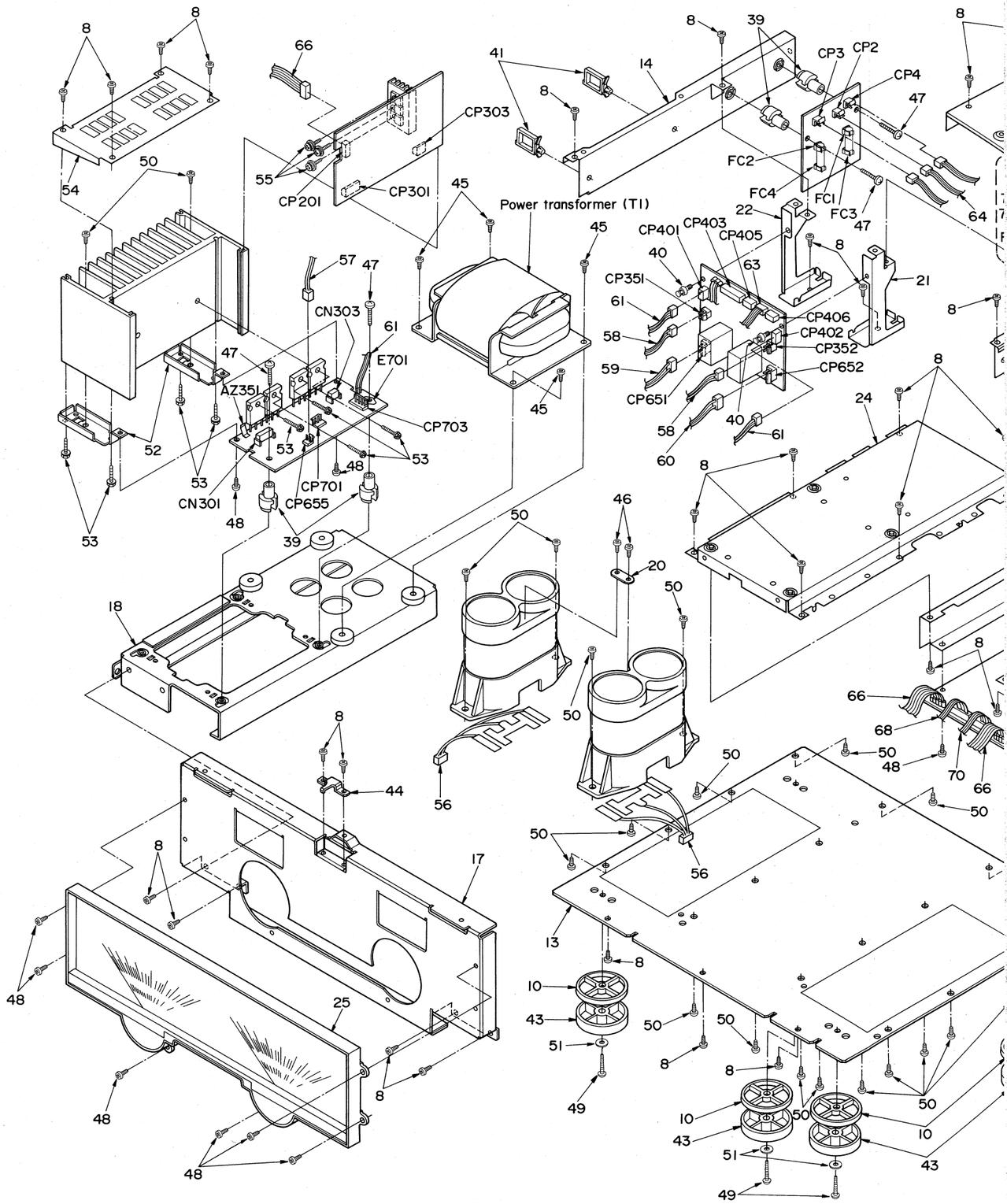
■ REPLACEMENT PARTS LIST

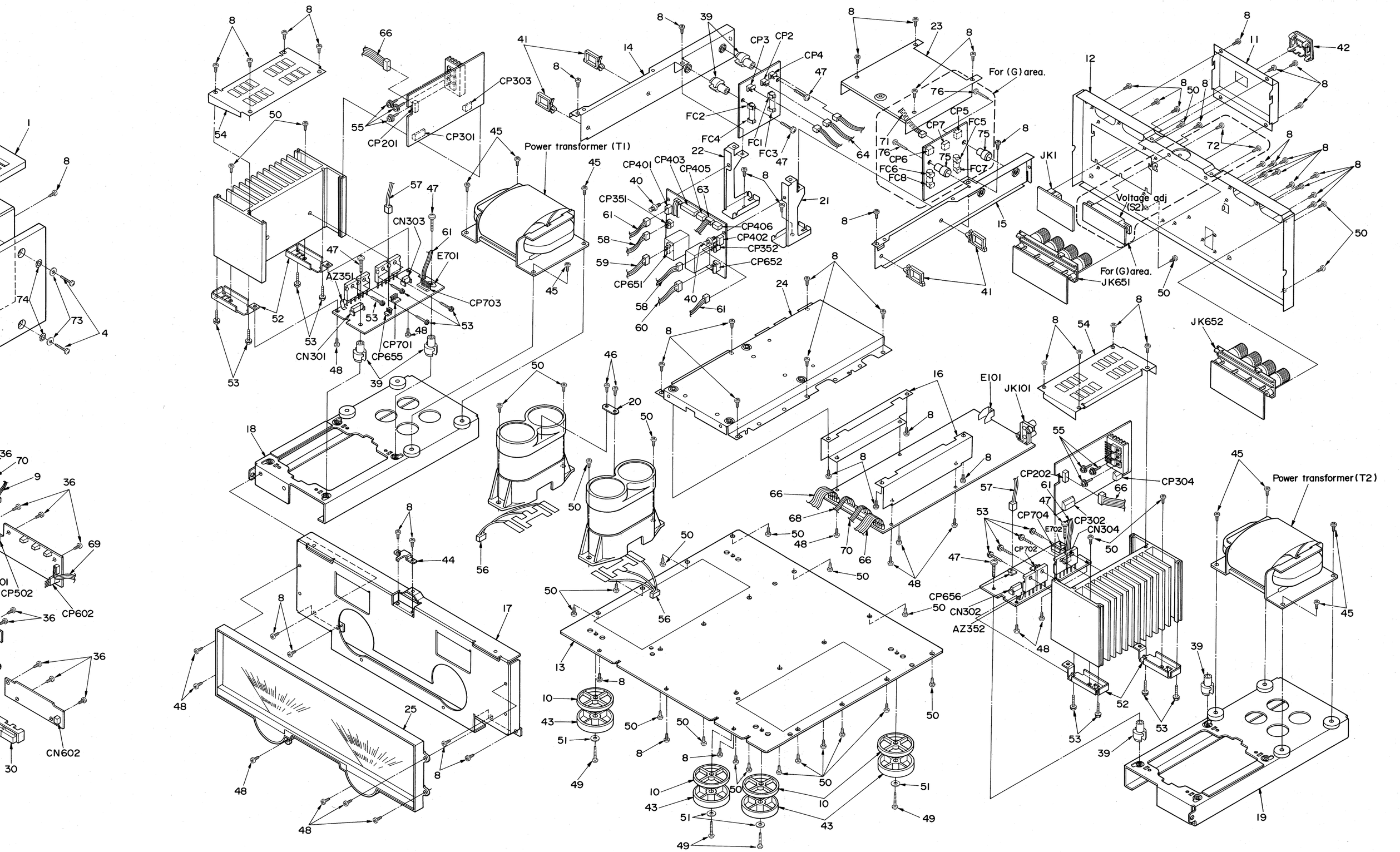
Note: *The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RGK0397-K	CABINET ORNAMENT(L)・(R)	
2	RFKNA2000EGA	SIDE PANEL(L) ASS'Y	
3	RFKNA2000EGB	SIDE PANEL(R) ASS'Y	
4	RHD30034	SCREW	
5	RFKKEA2000EG	CABINET ASS'Y	
6	SNE2095-5	SCREW	
7	SNE2129-3	SCREW	
8	XTBS3+8JFZ1	SCREW	
9	RFKEA2000EGA	CONNECTOR ASS'Y(2P)	
10	RGQ0085-K	FOOT SPACER	
11	RGR0069B-B	SUB REAR PANEL	
12	RGR0172A-A	REAR PANEL	(EG)
12	RGR0172A-B	REAR PANEL	(EB)
12	RGR0172B-A	REAR PANEL	(G)
13	RKU0018-2	BOTTOM CHASSIS	
14	RMA0250	SIDE ANGLE(L)	
15	RMA0251	SIDE ANGLE(R)	
16	RMA0697	P.C.B. HOLDER	
17	RMA0698	METER HOLDER	
18	RFKNA2000EGC	TRANSFORMER CHASSIS(L)ASS'Y	
19	RFKNA2000EGD	TRANSFORMER CHASSIS(R)ASS'Y	
20	RMQ0112-1	CAPACITOR HOLDER	
21	RMQ0113	P.C.B. HOLDER(R)	
22	RMQ0114	P.C.B. HOLDER(L)	
23	RSC0077A	PRE SHIELD CASE	
24	RSC0078A	DAC CASE	
25	RSE0003	METER	
26	RFKGEA2000EG	FRONT PANEL ASS'Y	
27	RGK0557-T	TRANSPARENT GLASS	
28	RGL0192-Q	PANEL LIGHT(A)	
29	RGL0193-Q	PANEL LIGHT(B)	
30	RGU0512C-K	SPEAKERS BUTTON	
31	RGU0890-K	POWER SWITCH BUTTON	
32	RHD30042	SCREW	
33	RHN30004	NUT	
34	RMA0699	LAMP HOUSE	
35	RMG0308-K	BUSHING(B)	
36	XTBS26+8J	SCREW	
37	XTWS3+8T	SCREW	
38	XWG3	WASHER	
39	SHE187-2	P.C.B. SUPPORT	
40	SHR415	LATCH	
41	SHR9814	CLAMPER	
42	SJS9231A	AC INLET COVER	
43	SKL306	RUBBER FOOT	
44	SUW2987	METER HOLDER	
45	XTBS3+10JFZ1	SCREW	
46	XTB3+10JFZ	SCREW	
47	XTB3+20J	SCREW	
48	XTB3+8JFZ	SCREW	
49	XTB4+16FFZ	SCREW	
50	XTB4+8FFZ	SCREW	
51	XWE5X12FVC	WASHER	
52	RMQ0111	RADIATOR ANGLE	
53	SNE2117-1	SCREW	
54	RMY0036	SUB RADIATING PLATE(L)・(R)	
55	XYN3+F8	SCREW	
56	REZ0158	CONNECTOR ASS'Y(3P)	
57	RFKEA2000EGB	CONNECTOR ASS'Y(2P)	
58	RFKEA2000EGC	CONNECTOR ASS'Y(2P)	
59	RFKEA2000EGD	CONNECTOR ASS'Y(3P)	
60	RFKEA2000EGE	CONNECTOR ASS'Y(3P)	
61	RFKEA2000EGF	CONNECTOR ASS'Y(3P)	
62	RFKEA2000EGG	CONNECTOR ASS'Y(3P)	
63	RFKEA2000EGH	CONNECTOR ASS'Y(4P)	
64	RFKEA2000EGI	CONNECTOR ASS'Y(4P)	
65	RFKEA2000EGJ	CONNECTOR ASS'Y(4P)	
66	RFKEA2000EGK	CONNECTOR ASS'Y(6P)	
67	RFKEA2000EGL	CABLE ASS'Y(4P)	
68	RFKEA2000EGM	CONNECTOR ASS'Y(11P)	
69	RFKEA2000EGN	CONNECTOR ASS'Y(4P)	
70	RFKEA2000EGP	CONNECTOR ASS'Y(10P)	
71	RFKEA2000GQ	CONNECTOR ASS'Y(5P)	(G)
72	XTBS3+8JFZ1	SCREW	(G)
73	RHW85001	WAVE WASHER	
74	XWE6FZ	WASHER	
75	SHE187-2	P.C.B. SUPPORT	(G)
76	XTB3+20J	SCREW	(G)

■ CABINET PARTS LOCATION






5
6
7
8
9
10
11
12
13
15
Power transformer (T1)
Power transformer (T2)
For (G) area.
Voltage adj (S2)
CP201
CP301
CP303
CP401
CP403
CP405
CP406
CP402
CP352
CP652
CP651
CP351
CP701
CP703
CP655
CP502
CP602
CP202
CP304
CP704
CP302
CP702
CP656
CN303
CN301
CN602
CN302
CN304
AZ351
AZ352
E701
E702
E101
JK101
JK651
JK652
FC1
FC2
FC3
FC4
FC5
FC6
FC7
FC8
CP2
CP3
CP4
CP5
CP6
CP7

■ REPLACEMENT PARTS LIST

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
*The "(SF)" mark denotes the standard part.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC201, 202	AN7062N	VOLTAGE AMP	
IC301, 302	M5219P	DIFFERENTIAL AMP	
IC451	AN7073	MUTING/PROTECTION	
IC501	BA6138	METER DRIVE AMP	
IC502	M5218AP	METER DRIVE BUFFER AMP	
IC601	MN4001B	SPEAKER SELECTOR	
		TRANSISTOR(S)	
Q201-204	2SA1123RSTTA	TRANSISTOR	
Q205-208	2SC2631RSTTA	TRANSISTOR	
Q209, 210	2SA1123RSTTA	TRANSISTOR	
Q253, 254	2SD1761EF	TRANSISTOR	
Q255, 256	2SC3311A-Q	TRANSISTOR	
Q257, 258	2SA1309A-R	TRANSISTOR	
Q259, 260	2SC2631RSTTA	TRANSISTOR	
Q261, 262	2SA1123RSTTA	TRANSISTOR	
Q263, 264	2SK2013OY	TRANSISTOR	
Q265, 266	2SJ313OY	TRANSISTOR	
Q301, 302	2SC2631RSTTA	TRANSISTOR	
Q303-306	2SA1123RSTTA	TRANSISTOR	
Q307, 308	2SC2631RSTTA	TRANSISTOR	
Q351, 352	2SC1815BG	TRANSISTOR	
Q353, 354	2SC3944AQRS	TRANSISTOR	
Q355, 356	2SA1535AQRS	TRANSISTOR	
Q357, 358	2SC3182R	TRANSISTOR	
Q359, 360	2SA1265R	TRANSISTOR	
Q361, 362	2SC3182R	TRANSISTOR	
Q363, 364	2SA1265R	TRANSISTOR	
Q401, 402	2SB1036R	TRANSISTOR	
Q451	2SA992EFPTA	TRANSISTOR	
Q503	2SA1309A-R	TRANSISTOR	
Q601, 602	2SA1309A-R	TRANSISTOR	
Q603, 604	2SC3311A-Q	TRANSISTOR	
Q651	2SC3311A-Q	TRANSISTOR	
		DIODE(S)	
D207, 208	MA4160M	DIODE	
D253-256	MA165	DIODE	
D257-260	MA4100MTA	DIODE	
D261-264	MA185TA	DIODE	
D265-268	MA165	DIODE	
D301-304	MA4100MTA	DIODE	
D305-308	MA29WA	DIODE	
D401, 402	MA185TA	DIODE	
D451	MA185TA	DIODE	
D452	MA4110MTA	DIODE	
D453	MA165	DIODE	
D501	MA165	DIODE	
D502	MA4082MTA	DIODE	
D503, 504	MA165	DIODE	
D505, 506	MA4100MTA	DIODE	
D507, 508	MA165	DIODE	
D601-617	MA165	DIODE	
D618-620	LN846RP-C	L. E. D.	
D621	LN446YP	L. E. D.	
D622	LN846RP-C	L. E. D.	
D623	MA4036MTA	DIODE	
D624-626	MA165	DIODE	
D627-629	MA4051MTA	DIODE	
D651-653	MA165	DIODE	
D701-708	P300DLF	DIODE	⚠
D751-754	1SR35200TB	DIODE	⚠
		VARIABLE RESISTOR(S)	
VR251, 252	EVNDCAA03B13	VOLT. CONTROL AMP ICQ ADJ.	
VR301, 302	EVNDCAA03B52	CURRENT DRIVE AMP ICQ ADJ.	
VR501, 502	EVNDXAA00B13	POWER METER ADJ.	
		THERMISTOR(S)	
TH251, 252	ERTD2ZGL251T	THERMISTOR	
TH351, 352	ERTD2ZHL104T	THERMISTOR	
TH501, 502	ERTD2ZHL104T	THERMISTOR	
		COIL(S)	
L1	SLQZ650MH49	COIL	(EG, EB) ⚠
L351, 352	SLQY07G-40	COIL	
L353, 354	SLQY18G-10	COIL	
L651-654	SLQY07G-40	COIL	
		TRANSFORMER(S)	
T1, 2	RTP7K5E004-W	POWER TRANSFORMER	(EG) ⚠
T1, 2	RTP7K5B003-W	POWER TRANSFORMER	(EB) ⚠
T1, 2	RTP7K5E006-W	POWER TRANSFORMER	(G) ⚠
		LAMP(S)	

Ref. No.	Part No.	Part Name & Description	Remarks
PL501-516	XAMR128S	LAMP	
		FUSE (S)	
F1, 2	XBA2C20TB0	FUSE 250V, T2A	⚠
F3, 4	XBA2C20TB0	FUSE 250V, T2A	(G) ⚠
		SWITCH (ES)	
S1	ESB8279V	POWER	⚠
S2	ESD26200A	VOLTAGE ADJ.	(G) ⚠
S601	EVQ21405R	OFF	
S602	EVQ21405R	SPEAKER A	
S603	EVQ21405R	SPEAKER B	
S604	EVQ21405R	SPEAKER A+B	
		CONNECTOR (S) AND SOCKET (S)	
CN301, 302	SJS50878JQ	SOCKET (8P)	
CN303, 304	SJS50578JQ	SOCKET (5P)	
CN602	SJS50581BB	SOCKET (5P)	
CP1, 2	RJP1A4204-1	CONNECTOR (3P)	
CP3, 4	RJP1A4204-1	CONNECTOR (3P)	(EG, EB)
CP3, 5	RJP1A4205	CONNECTOR (4P)	(G)
CP6	RJP1A4204-1	CONNECTOR (3P)	(G)
CP7	RJP1A4205	CONNECTOR (4P)	(G)
CP201, 202	SJT3611	CONNECTOR (6P)	
CP301, 302	SJT30845JQ	CONNECTOR (8P)	
CP303, 304	SJT30545JQ	CONNECTOR (5P)	
CP351, 352	RJP1A3202	CONNECTOR (2P)	
CP401, 402	SJT3319	CONNECTOR (3P)	
CP403	SJT3011	CONNECTOR (11P)	
CP405, 406	SJT3415	CONNECTOR (4P)	
CP501, 502	SJT3215	CONNECTOR (2P)	
CP601	SJT3007	CONNECTOR (10P)	
CP602	SJT30549BB1	CONNECTOR (5P)	
CP603	SJT3417	CONNECTOR (4P)	
CP651, 652	RJP1A4103	CONNECTOR (2P)	
CP653	SJT3319	CONNECTOR (3P)	
CP655, 656	RJP1A3202	CONNECTOR (2P)	
CP701-704	RJP1A3303	CONNECTOR (3P)	
		GND PLATE	
AZ351, 352	SUS227	GND PLATE	
E101	RMN0132	GND PLATE	
E701, 702	SNE1004-1	GND PLATE	
		FUSE HOLDER	
FC1-4	EYF52BC	FUSE HOLDER	

Ref. No.	Part No.	Part Name & Description	Remarks
FC5-8	EYF52BC	FUSE HOLDER	(G)
		RELAY (S)	
RL651, 652	RSY0004-1	RELAY	⚠
RL653	RSYG5A237P12	RELAY	⚠
		TERMINAL (S)	
JK1	SJS9231-1B	AC INLET	⚠
JK101	SJF3225-5A	UNBALANCE INPUT	
JK651, 652	RJH4403	SPEAKER A/B	
JK653	QJA0455ZC-A	HEADPHONES	
		PACKING MATERIAL	
P1	RPG1582	PACKING CASE	(EG, G)
P1	RPG1583-1	PACKING CASE	(EB)
P2	RPN0687	CUSHION	
P3	RPH0101	KRAFT PAPER	
P4	SPH6434	PROTECTION SHEET	
P5	RPQ0164	PAD	
P6	RPH0032	MIRROR SHEET	(EB)
		ACCESSORIES	
A1	RFKSEA2000EG	INSTRUCTION MANUAL ASS'Y	(EG)
A1	RQT1988-B	INSTRUCTION MANUAL	(EB)
A1	RFKSEA2000G	INSTRUCTION MANUAL ASS'Y	(G)
A2	RJA0019-2K	AC POWER SUPPLY CORD	(EG, G) ⚠ (SF)
A2	VJA0733	AC POWER SUPPLY CORD	(EB) ⚠ (SF)
A3	RQA0013	WARRANTY CARD	(EG, EB)
A4	RQCB0169	SERVICENTER LIST	
A5	SJP5213-2	POWER PLUG ADAPTOR	(G) ⚠
A6	RQLA0134	VOLTAGE CAUTION LABEL	(G)

■ RESISTORS AND CAPACITORS

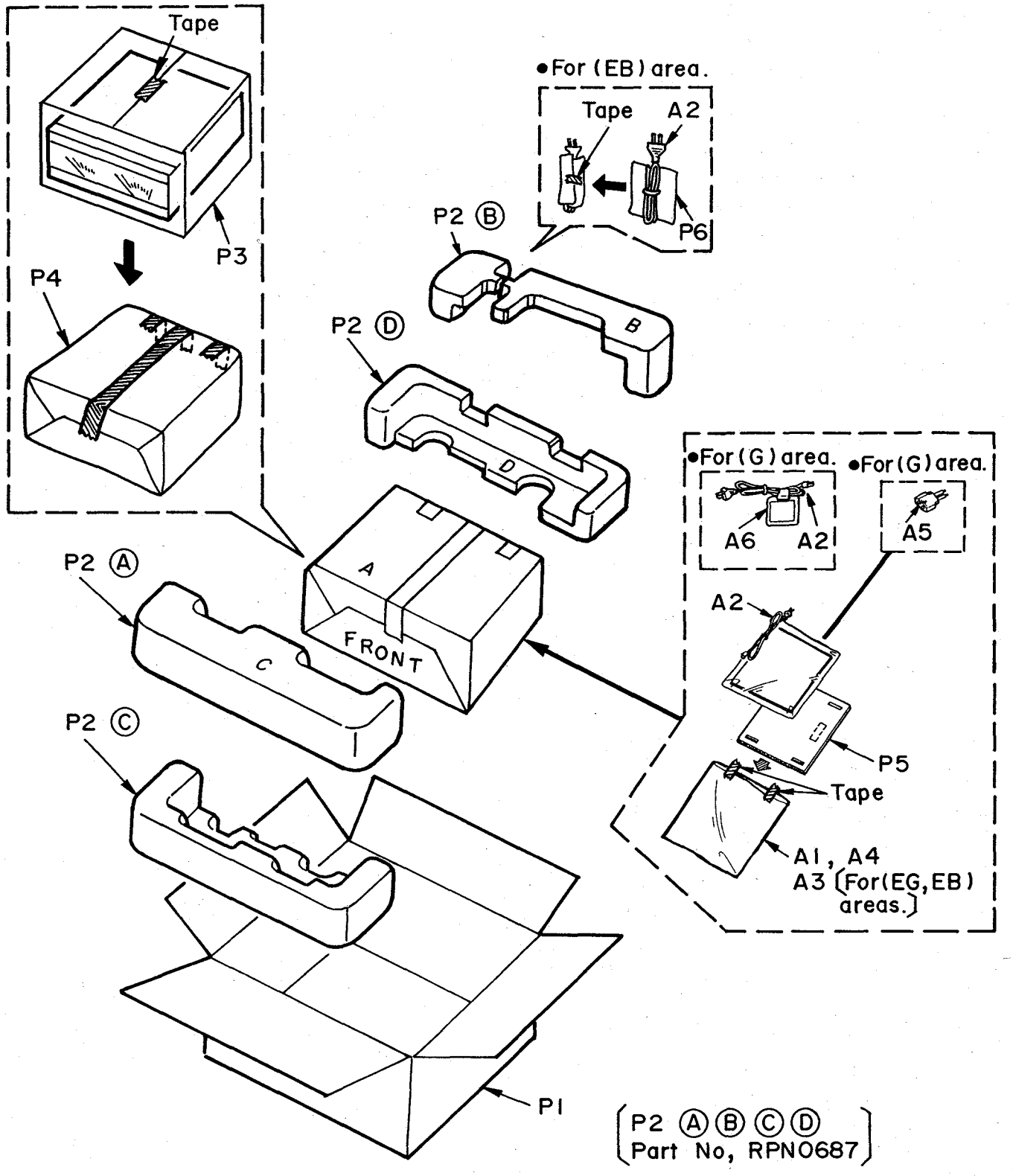
Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R1	ERC12ZGK335	1/2W 3.3M (EG, EB) ⚠
R101, 102	ERDAS3G471T	1/4W 470
R103, 104	ERDAS3G334T	1/4W 330K
R201, 202	ERDAS3G122	1/4W 1.2K
R203, 204	ERDAS3G333	1/4W 33K
R205, 206	ERDAF2VJ122T	1/4W 1.2K
R207, 208	ERDLS2VJ333T	1/4W 33K
R209, 210	ERDAS3G561	1/4W 560
R211-214	ERDAF2VJ101T	1/4W 100
R215, 216	ERDAS3G473	1/4W 47K
R217, 218	ERDS1FVJ822T	1/2W 8.2K ⚠
R219-222	ERDAF2VJ101T	1/4W 100
R223, 224	ERDAF2VJ332T	1/4W 3.3K
R225, 226	ERDAS3G333	1/4W 33K
R227, 228	ERDAF2VJ332T	1/4W 3.3K
R229, 230	ERDAS3G333	1/4W 33K
R253, 254	ERDAF2VJ472T	1/4W 4.7K
R255, 256	ERDAF2VJ151T	1/4W 150
R257, 258	ERDAF2VJ271T	1/4W 270
R261-264	ERDS2TJ273	1/4W 27K
R265-268	ERDAF2VJ101T	1/4W 100
R269, 270	ERDAF2VJ182T	1/4W 1.8K
R271-274	ERDAF2VJ2R2T	1/4W 2.2
R275-278	ERDAF2VJ271T	1/4W 270
R301, 302	ERDAF2VJ182T	1/4W 1.8K
R303, 304	ERDAF2VJ121T	1/4W 120
R305, 306	ERDAF2VJ182T	1/4W 1.8K
R307, 308	ERDAF2VJ121T	1/4W 120
R309-312	ERDAF2VJ100T	1/4W 10
R313-316	ERDAF2VJ332T	1/4W 3.3K
R317-320	ERDAF2VJ561T	1/4W 560
R321, 322	ERDAS3G104	1/4W 100K
R323, 324	ERDAF2VJ1R0T	1/4W 1
R325, 326	ERDAF2VJ102T	1/4W 1K
R327, 328	ERDAS3G182	1/4W 1.8K
R329, 330	ERDAF2VJ101T	1/4W 100
R351, 352	ERDAF2VJ103T	1/4W 10K
R353, 354	ERDAF2VJ332T	1/4W 3.3K
R355-358	ERDAF2VJ681T	1/4W 680
R359-366	ERDAF2VJ2R2T	1/4W 2.2
R367-374	RRECMKR22SC	5W 0.22
R375, 376	ERG1SJ100E	1W 10
R377-384	RRECMKR22SC	5W 0.22
R385-392	ERG1SJ100E	1W 10
R393, 394	ERDAF2VJ100T	1/4W 10
R397, 398	ERDAF2VJ331T	1/4W 330
R401, 402	ERDAF2VJ271T	1/4W 270
R403, 404	ERDAF2VJ472T	1/4W 4.7K
R405, 406	ERDS2TJ153	1/4W 15K
R451	ERDS2TJ563	1/4W 56K
R452	ERDS2TJ473	1/4W 47K
R453	ERDS2TJ273	1/4W 27K
R454	ERDS2TJ153	1/4W 15K
R455	ERDS2TJ103	1/4W 10K
R456	ERDS2TJ153	1/4W 15K
R457	ERDAF2VJ561T	1/4W 560
R501, 502	ERDS1FVJ472T	1/2W 4.7K ⚠
R503, 504	ERDAF2VJ271T	1/4W 270
R505, 506	ERDS2TJ155	1/4W 1.5M
R507, 508	ERDS2TJ682T	1/4W 6.8K
R509, 510	ERDS2TJ471	1/4W 470
R511, 512	ERDAF2VJ471T	1/4W 470
R513	ERDS2TJ104	1/4W 100K
R515	ERDS2TJ563	1/4W 56K
R516	ERDS2TJ681	1/4W 680
R517	ERDS2TJ332	1/4W 3.3K
R518, 519	ERDS2TJ103	1/4W 10K
R520	ERDS2TJ223	1/4W 22K
R521	ERDS2TJ104	1/4W 100K
R523, 524	ERDS2TJ154	1/4W 150K
R525, 526	ERDS2TJ223	1/4W 22K
R527, 528	ERDS2TJ102	1/4W 1K
R529, 530	ERDS2TJ123	1/4W 12K
R531, 532	ERDS2TJ103	1/4W 10K
R601-604	ERDS2TJ473	1/4W 47K
R605	ERDS2TJ223	1/4W 22K
R606, 607	ERDS2TJ472	1/4W 4.7K
R608, 609	ERDS2TJ223	1/4W 22K
R610	ERDS2TJ103	1/4W 10K
R611	ERDS2TJ473	1/4W 47K
R612, 613	ERDS2TJ331	1/4W 330
R616, 617	ERDS2TJ331	1/4W 330
R619, 620	ERDS2TJ331	1/4W 330
R621	ERDS2TJ471	1/4W 470
R622	ERDS2TJ331	1/4W 330
R623	ERDS2TJ471	1/4W 470
R624	ERDS2TJ151	1/4W 150
R651	ERDS2TJ472	1/4W 4.7K
R655, 656	ERG1SJ181E	1W 180
R657, 658	ERG1SJ151E	1W 150
R659, 660	ERD2FCVG221T	1/4W 220
R661	ERDAF2VJ221T	1/4W 220
R701-704	ERDAF2VJ6R8T	1/4W 6.8
R751, 752	ERDAF2VJ2R2T	1/4W 2.2

Ref. No.	Part No.	Values & Remarks
		CAPACITORS
C1	ECKWNS103ZVS	500V 0.01U ⚠
C101, 102	ECCR1H181K5	50V 180P
C201, 202	ECA1CPXS220B	16V 22U
C203, 204	ECKT1H221KB	50V 220P
C205, 206	ECA1CPXS221B	16V 220U
C207, 208	ECCR2H270K5	500V 27P
C209, 210	ECKR2H221KB5	500V 220P
C213, 214	ECBT1H331KB5	50V 330P
C215, 216	ECBT1H820KB5	50V 82P
C217-220	ECA2APXS010B	100V 1U
C221, 222	ECBT1H104ZF5	50V 0.1U
C223, 224	ECBT1H102KB5	50V 1000P
C225, 226	ECA2APXS010B	100V 1U
C227-230	ECCR2H270K5	500V 27P
C231, 232	ECKR1H103ZF5	50V 0.01U
C251-254	ECCV2H680K	500V 68P
C255, 256	ECBT1H104ZF5	50V 0.1U
C257-260	ECEA1HKA010B	50V 1U
C301, 302	ECQB1H272JF3	50V 2700P
C303-306	ECA0JPXS101B	6.3V 100U
C307, 308	ECBT1H221KB5	50V 220P
C309-312	ECA1CPXS100B	16V 10U
C313-316	ECA1CPXS330B	16V 33U
C317-320	ECA2APXS010B	100V 1U
C321, 322	ECBA1H681KB5	50V 680P
C351, 352	ECBT1H104ZF5	50V 0.1U
C353-356	ECBA1H681KB5	50V 680P
C357-360	ECQV1H473JM3	50V 0.047U
C361-364	ECQV1H224JM3	50V 0.22U
C451	ECA0JAP331B	6.3V 330U
C452	ECKT1H223ZF	50V 0.022U
C453	ECEA0JKA470B	6.3V 47U
C454, 455	ECEA1HKA4R7B	50V 4.7U
C501, 502	ECEA1EKN3R3B	25V 3.3U
C503, 504	ECEA1HKAR47B	50V 0.47U
C505, 506	ECEA1HKA4R7B	50V 4.7U
C508	ECA1CM332E	16V 3300U
C509	ECBT1E103ZF	25V 0.01U
C510	ECEA1HKAR22B	50V 0.22U
C601-604	ECBT1E103ZF	25V 0.01U
C651-654	ECQB1H153JF3	50V 0.015U
C655-658	ECKR1H181KB5	50V 180P
C659, 660	ECBT1H102KB5	50V 1000P
C701-704	ECED71M123TM	71V 12000U ⚠
C705-708	ECA2APXS101E	100V 100U ⚠
C709-712	ECHR1H103JZ3	50V 0.01U
C713, 714	ECQE2104KF3	125V 0.1U

Ref. No.	Part No.	Values & Remarks
C715, 716	ECKR1H103ZF5	50V 0.01U
C717, 718	ECQE2104KF3	125V 0.1U
C719, 720	ECEA1HKA010B	50V 1U
C751, 752	ECA1EM471E	25V 470U ⚠

■ PACKAGING



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